U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives

Report of Investigation

Title of Investigation:	Investigation Number:	Report Number:
Comayagua Prison Farm Fire	701500-12-0003	1

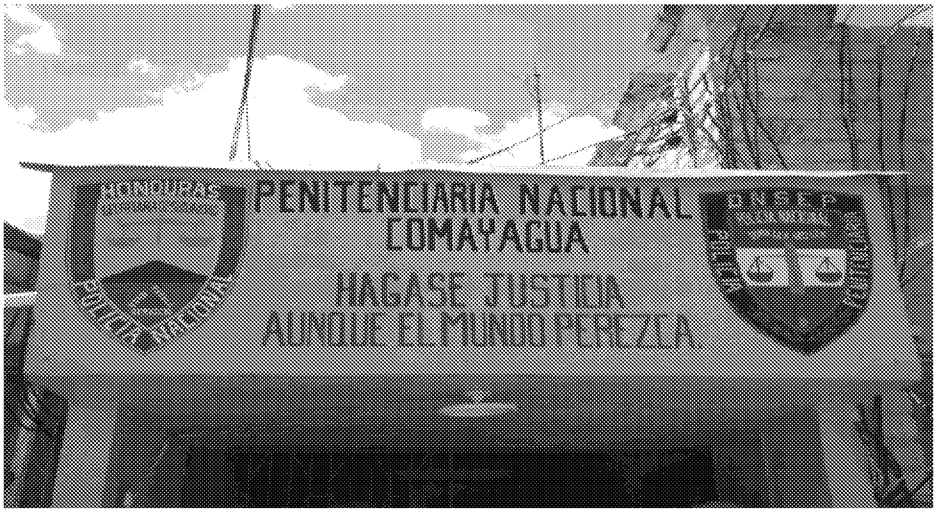
ORIGIN AND CAUSE REPORT

SUMMARY OF EVENT:

Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) International Response Team (IRT) Activation and Certified Fire Investigator (CFI) origin and cause determination. ATF case number 701500-12-0003.

SYNOPSIS:

1. On Thursday, February 16, 2012, the ATF IRT was activated to Comayagua, Honduras, to assist the US State Department, the Honduran National Police, the Ministerio Publico and the Comayagua Fire Department with a fatal fire investigation that occurred at the Pentenciaria Nacional Comayagua Farm Prison. At the time the team departed, the fire had resulted in the loss of 361 lives.



Front entrance to the Comayagua prison

NARRATIVE:

Prepared by: (b)(6)/(b)(7)(C)	Title: Special Agent, Fire Programs and Training Branch	Signature:	Date:
Authorized by: (b)(6)/(b)(7)(C)	Title: National Response Team, FPTB	Signature:	Date:
Second level reviewer (optional): (b)(6)/(b)(7)(C)	Title: Chief, Fire Programs and Training Branch	Signature:	Date:

2. This fire occurred on Tuesday, February 14, 2012, at approximately 10:20 p.m.

3. The Comayagua Farm Prison is a part of the Honduran National Prison System; and as such is not insured by a third party.

4. On Wednesday, February 15, 2012, the Honduran government requested support for the origin and cause determination from the United States Embassy. The US Embassy, in turn, contacted ATF and requested IRT support with the fire. The IRT was activated to assist the Honduran government on February 16, 2012. On Friday, February 17, 2012, members of the IRT traveled to Honduras and traveled to the scene. On that day, an initial assessment commenced followed by the origin and cause investigation for the above-described fire.

5. The authority to enter the scene was initially granted via the Honduran government and the Policia Nacional, who had authority over the prison and thus the scene.

6. Scene security for the premises prior to the arrival of the IRT and during the subsequent investigation was provided by the prison guards.

7. Prior to the arrival of the ATF International Response Team, the Comayagua Fire Department and the Ministerio Publico had begun an initial processing of the scene. This consisted of photographing and videoing the scene. The primary purpose initially was the recovery of the numerous bodies that had perished in the fire. These photographs and videos were provided to the ATF IRT.

8. Once the IRT arrived, all photographs were taken by SA [redacted] The Honduran's continued videotaping the scene processing throughout the entirety of the investigation.

PARTICIPATING FIRE INVESTIGATORS:

ATF-IRT Members

(b)(6)/(b)(7)(C), CFI - Team Supervisor, Fire Programs and Training Branch [FPTB])
(b)(6)/(b)(7)(C) - Electrical Engineer, Chief, Fire Research Lab
(b)(6)/(b)(7)(C) Certified Fire Investigator, FPTB
(b)(6)/(b)(7)(C) Certified Fire Investigator, FPTB
(b)(6)/(b)(7)(C) - Senior Special Agent, International Affairs Office (IAO)
(b)(6)/(b)(7)(C) - Special Agent, International Affairs Office (IAO)
(b)(6)/(b)(7)(C) Chief, International Affairs

Experts assigned by Court of Honduras:

(b)(6)/(b)(7)(C) CSI
(b)(6)/(b)(7)(C) Anti Bomb Squad

(b)(6)/(b)(7)(C) Electricity Company (ENEE)
(b)(6)/(b)(7)(C) Deputy Chief, Fire Investigator

District Attorney's Office (Fiscals Office) assigned to Crime scene

(b)(6)/(b)(7)(C)

DA's Office CSI Interpretar assignad to Crime Scene

(b)(6)/(b)(7)(C)

Criminal Investigations Unit (DNIC)

(b)(6)/(b)(7)(C)

Fiscals Jurisdiction

(b)(6)/(b)(7)(C) (Public Ministry, MP Comayagua)
(b)(6)/(b)(7)(C) (Public Ministry, MP Tegucigalpa, DH)
(b)(6)/(b)(7)(C) (Public Ministry, MP Tegucigalpa DH)
(b)(6)/(b)(7)(C) (Public Ministry, MP Tegucigalpa DH)

US Military:

Colonel (b)(6)/(b)(7)(C) Commander of Joint Task Force-Bravo (JTF-B), Soto Cano

Security Forces:
United States Military:
SPC.
SPC. (b)(6)/(b)(7)(C)
Honduran Special Forces
(b)(6)/(b)(7)(C)

JTF-B Soto Cano Fire Department:
MSGT (b)(6)/(b)(7)(C) Fire Chief
TSGT (b)(6)/(b)(7)(C) A/Chief of Training
TSGT (b)(6)/(b)(7)(C) A/Chief of Training

WITNESS STATEMENTS:

(The interviews conducted in this investigation were primarily conducted by the Honduran National Police Department and the Fiscals Office. At the time the IRT left the scene, hundreds of interviews had been conducted. The following are summations of pertinent interviews directly related to the origin and cause of the fire)

9. **Fire Discovery:** A 119 (emergency 911) phone call was received by the local dispatch.

10. **Fire Suppression:** The Cuerpo de Bomberos de Comayagua (Comayagua Fire Department) responded to the scene. Deputy Fire Chief (b)(7)(C),(b)(6) provided information as to the initial response and the subsequent suppression efforts that ensued upon their arrival at the prison. According to Deputy Fire Chief (b)(6),(b)(7)(C) they were dispatched to the scene at 10:58 pm. It took them approximately two minutes to respond to the prison. Upon arrival, they were held at the front gate for about six minutes before they were allowed entry. They responded with two engines, one was a 1,000 gallon capacity engine and the second was a 3,000 gallon capacity engine. They pulled hose line off the 1,000 gallon engine and had the 3,000 gallon engine supply water to the first engine. They pulled their hand lines into the building, through the security gates, the sally port and toward the prison modules. The fire department utilized a wye coupling at the northeast corner of the prison building that housed Modules 6-10. From the wye, a hand line was pulled behind (north) of the building and around the west side. This line attacked the fire that was in Module 6 and protected the exposures to the west and south of the building. The second line was stretched to the east of the building and attacked the fire in Module 10, as well as protecting the exposures to the east and south. Deputy Chief (b)(6),(b)(7)(C) stated that the fire attack then proceeded toward the middle of the modules building.

11. Deputy Chief (b)(6),(b)(7)(C) stated that when the fire department arrived, all the cell doors were in the open position. When they entered into the modules, he stated that most of the deceased were found in the modules bathroom area.

12. **Witness Statement:** An interview was conducted with Paola Castro, Governor of Comayagua related to information that had been quoted in the local newspaper. Governor Castro came to the scene to see if any assistance could be provided by her office in support of the investigation. The interview took place outside the prison walls, and was conducted by SA (b)(7)(C),(b)(6) SA (b)(7)(C),(b)(6) and SA (b)(7)(C),(b)(6) SA (b)(7)(C),(b)(6) interpreted between the interviewers and the governor. The information received by the investigators was that an inmate had called the governor from his cell in Module 6 with a cell phone. The prisoner allegedly told the governor that he was going to set a fire and burn the prison down, killing everyone. Governor Castro stated that that information was untrue and provided the following statement.

13. Governor Castro stated that she works closely with the jail and thus the inmates within the jail. She stated that she is the representative for the President with people in prisons and thus she has a direct relationship with the prisoners. She also has a past history with the prisoners in her previous role as a Congresswoman. Through these interactions, she has met a lot of people with inmates as relatives.

14. Governor Castro stated that on the day of the fire, she received a voice mail on her cell phone. The caller stated something to the effect that "Governor, help us, we're burning." The governor stated that she called the police and fire department and was informed that they were aware of the fire and were responding. The governor accidently deleted the voice mail by dialing over the number.

15. The governor said that most of the inmates have her cell phone number. As the President's representative to the prison system, she does many interviews on radio and television; during those interviews she frequently gives out her cell number. Based on this, many of the prisoners have her number.

16. She further stated that one of the current inmates, (b)(7)(C),(b)(6) was in Module 1 at the time of the fire and he called his mother asking her for help and saying, "We're all burning."

17. Since the fire, she has not spoken to any of the prisoners.

18. **Witness Statements:** Survivor of Module 6 – An interview was conducted by Special Agents (b)(7)(C),(b)(6) and (b)(7)(C),(b)(6) with (b)(7)(C),(b)(6) a resident of Module 6.

19. (b)(7)(C),(b)(6) stated that at 9:00 p.m. the prison does a count of the prisoners. Just prior to that count, at approximately 8:50 p.m. (b)(7)(C),(b)(6) a had seen (b)(7)(C),(b)(6) smoking marijuana in his bunk (b)(7)(C),(b)(6) knew the time because it was just before quiet time/count at 9:00 pm when everyone must be in their cell. (b)(7)(C),(b)(6) bunk bed is the top bunk in the fourth column along the west of the module.

20. (b)(7)(C),(b)(6) tated that around 11:00 p.m. he was awoken by smoke. He opened the door of his bunk (row1 bunk 4) and looked down the corridor and saw (b)(7)(C),(b)(6) trying to put out a small fire with a pale of water. He did not pay much attention to it because he figured it would be taken care of and went back into his bunk to return to sleep. He stated that there appeared to be no commotion and he thought they would easily put the fire out.

21 (b)(7)(C),(b)(6) described the fire as being small and along the western wall, located immediately above the top bunk bed in row 4. He said that the fire was about one foot wide by a foot high.

22. (b)(7)(C),(b)(6) Cell Coordinator) who resides in the bottom bunk (row 1, bunk 1) yelled out to (b)(7)(C),(b)(6) that "We need to get out of here before we get burned".

23. (b)(7)(C),(b)(6) a looked out his door again, and saw that the fire had extended to the other beds around it and was "really big". He exited his bunk and saw a man he believed to be (b)(7)(C),(b)(6) on fire and fall from the top bunk (row 3, bunk 4) to the floor. The area around (b)(7)(C),(b)(6) bunk was also on fire. As he exited his bunk bed, (b)(7)(C),(b)(6) jumped down breaking his leg.

24. (b)(7)(C),(b)(6) and 3 other individuals identified as Nery Ricardo Gomez-Padilla (died in hospital), (b)(7)(C),(b)(6) (b)(7)(C),(b)(6) (in hospital) and unidentified male hid in the coordinators bunk (bottom bunk/first row) to protect themselves from the fire. The unidentified male left the group and ran to the restroom in the rear of the cell. The remaining three individuals remained together splashing water and juice on themselves from a refrigerator that was located in the bunk area.

25. Eventually the three individuals were forced to leave due to the bunk collapsing and catching fire. The three individuals were at the front door when inmate (b)(7)(C),(b)(6) opened the door with the keys.

26. (b)(7)(C),(b)(6) and two other individuals escaped through the opened gate. (b)(7)(C),(b)(6) does not know how inmate (b)(7)(C),(b)(6) got the keys.

27. **Witness Statements:** Survivor of Module 6 – An interview was conducted by Special Agents (b)(7)(C),(b)(6) and (b)(7)(C),(b)(6) with (b)(7)(C),(b)(6) a resident of Module 6. (b)(7)(C),(b)(6) stated that he sells eateries, juices and small type groceries inside the module. That at 9:10pm he took a shower and went to sleep on his bunk located on the 2nd line top bunk east side.

28. He stated that at 10:30 p.m., he was awoken by the sounds of someone saying, "Fire, fire, fire." Later, he heard the voice of (b)(7)(C),(b)(6), say "key master we're going to get burnt".

29. He stuck his head out of his bunk bed and saw that there was fire to the rear (north) of the cell. He began to exit his bunk bed by climbing down the bunk toward the center of the module. While climbing downward, he observed sparks of fire coming from the bunk belonging to (b)(7)(C),(b)(6) This bunk was to the north of his bunk and was located along the fourth column and was the third bunk bed on the west. He also observed him trying to put out a fire with the sheet and his pillow. He later observed that pillow and sheet were on fire. The fire extended upwards to (b)(7)(C),(b)(6) bunk. (b)(7)(C),(b)(6) caught on fire and fell to the floor while on fire.

30. He also observed "Pitunche" fall from across (b)(7)(C),(b)(6) bunk. He observed that "Pitunche" was on fire and when he fell to the floor, he was engulfed in fire and died.

31. He further observed that everything was engulfed in fire; he called for the key person and got close to the door. There he saw (b)(7)(C),(b)(6) Nery Ricardo Gomez-Padilla (died in hospital) and (b)(7)(C),(b)(6) (b)(7)(C),(b)(6) (in hospital). These three men were crammed into an open space toward the front of the module and along the west wall.

32. He noticed where the door was and that everything was beginning to become engulfed in flames; and since he was in fear he decided to go for the roof. He climbed back up his bunk bed and pried open the slats of the roof. As he was approximately halfway out through the roof he heard the ringing of keys.

33. He exited the hole above his bunk while breaking it with his hands and head. He was able to exit. While exiting he grabbed hold of a tree limb and a burst of flame followed his exit through his exit hole.

34. He saw (b)(7)(C),(b)(6) Nery Ricardo Gomez-Padilla and (b)(7)(C),(b)(6) leave but Nery Ricardo Gomez-Padilla was in a very bad condition, Gomez-Padilla stated, "I'm going to die".

35. **Witness Statements:** Prison "medic" – An interview was conducted by Special Agents (b)(7)(C),(b)(6) and (b)(7)(C),(b)(6) with (b)(7)(C),(b)(6) (b)(7)(C),(b)(6) stated that he is a resident of the Infirmary, which is located to the east of the modules.

36. On the night of the fire he was in his sleeping area watching TV and heard the commotion and people screaming fire from the cell areas. He heard inmates yelling for the key master to open the gates because they were burning. He estimated the time to be approximately 10:20 p.m. based on the television show that he was watching.

37. (b)(7)(C),(b)(6) exited the infirmary via the cell door. Due to his position within the prison, he has key access to his cell door. He then went to the area which has access to the module areas. He immediately looked towards Module 6 and could see a lot of smoke coming from the module. Immediately he went towards the sally port where he told the key master about the fire. The key master threw him the keys and he ran back toward the modules. As he ran toward Module 6, he passed in front of Modules 10-7 and could see that they were not involved in the fire.

38. While opening Module 6, he stated that he had to find the correct key and it took a few moments. While looking for the right key, he felt intense heat coming from above him and had to shield his head and face to protect himself. He was able to open the prison gate; and after doing so, three inmates exited. After the three prisoners exited, he stated that he could not hear anyone screaming or yelling for help.

39. He then proceeded to open Module 7 where he noticed that the module was now on fire. He again had to find the right key and the heat became more intense. The heat from the top of the module was coming down on him. Three inmates exited (b)(7)(C),(b)(6), while others came out through the roof.

40. He then moved to Module 8. Again, this cell was now on fire. He repeated the steps and opened the door and two inmates came out ((b)(7)(C),(b)(6) and another unknown inmate).

41. He proceeded to Module 9 but did not open the door because he only saw black smoke and he didn't see anybody at the gate. He then moved to Module 10 where there was an inmate that was striking the lock with a stool. (b)(7)(C),(b)(6) was able to open the door and 4 inmates exited the module. He believes they were: (b)(7)(C),(b)(6) (b)(7)(C),(b)(6) Another prisoner exited through the roof: he only knew as (b)(7)(C),(b)(6)

42. (b)(7)(C),(b)(6) took the keys from him and opened Module 9. Inmates in this cell were screaming not to be left behind to die because there was fire within the smoke.

43. (b)(7)(C),(b)(6) estimated that from the time he began to open the door to Module 6 to opening Module 10 was approximately 5-10 minutes. Thereafter he proceeded to open the doors of the modules 2-5 that were located across from the burning cells. Module 1 had its lock broken prior to him arriving.

44. (b)(7)(C),(b)(6) stated that the jail director showed up when he was opening Module 4 and asked him if there were more modules to open; at which he replied to open the rest. He learned later that an inmate from Module 1 exited through the roof, went to the gym, got a weight lifting bar and pried the lock off the gate that secured Module 1.

45. He stated that when he went back to cell 6, he could see gray smoke coming from the center of Module 6. He thinks that it took approximately 40-45 minutes for the fire to destroy all 5 modules. When the firemen came, the modules were already destroyed. (b)(7)(C),(b)(6) states that he didn't hear any shots being fired and did not know of anyone being shot.

46. **Witness Statements:** Prison "electrician" – An interview was conducted by Special Agents (b)(7)(C),(b)(6) and (b)(7 (b)(6)/(b)(7)(C), (b)(6)/(b)(7)(C)

47. (b)(7)(C),(b)(6) stated that the night of the fire he was in the area called "Alcaldia" where he sleeps and at approximately 10:20 p.m. he heard inmates screaming fire and yelling that the corrugated aluminum roofing was electrified. After hearing this, he went to the entrance door of the "Alcaldia" and could see that Module 6 was on fire. He also saw an electrical cable that was in front of him burning with what appeared to be like a blue streak running along the length of the wire. Immediately after seeing that there was electricity in the cable he went into the "Alcaldia" and turned off all the breakers to prevent the damage from spreading.

48. **Witness Statements:** On February 18, 2012, Special Agent (b)(7)(C),(b)(6) and Deputy Fire Chief (b)(7)(C),(b)(6) (b)(6),(b)(7)(C) Comayagua Fire Department, interviewed (b)(7)(C),(b)(6) adult male, age (b)(7)(C),(b)(6) (b)(7)(C),(b)(6). (b)(7)(C),(b)(6) is an inmate at the Comayagua Farm Prison serving 4 years for robbery. On the night of the fire, (b)(7)(C),(b)(6) stated that he was in his bunk in Module 1 when he heard a lot of screams and shouting. (b)(7)(C),(b)(6) said that there was so much noise; he thought that someone was being killed. (b)(7)(C),(b)(6) advised that he got up from his bunk and went to the locked module door. (b)(7)(C),(b)(6) looked out the door and observed fire coming from the roof of Module 6. (b)(7)(C),(b)(6) stated that he then heard prisoners shouting, "(b)(7)(C),(b)(6) put the fire out". (b)(7)(C),(b)(6) are nicknames used for (b)(7)(C),(b)(6) who is a prisoner housed in Module 6.

49. (b)(7)(C),(b)(6) advised that he is very familiar with (b)(7)(C),(b)(6) and that he is a crack addict. (b)(7)(C),(b)(6) states that he believes that (b)(7)(C),(b)(6) resides in the fourth column from the door, third bunk bed up from the floor on the west wall. He also stated that (b)(7)(C),(b)(6) uses crack numerous times during the course of a day and it is his opinion that (b)(7)(C),(b)(6)s use of crack is responsible for the fire. (b)(7)(C),(b)(6) stated that when the inmates light the crack pipes, they often drop the matches and start small fires.

50. (b)(7)(C),(b)(6) said that the prisoners were circulating numerous rumors regarding how the fire started and then spread through the cells. He said the rumors regarding the use of gasoline and/or an electrical fire are untrue. (b)(7)(C),(b)(6) reported that no one had any gasoline in the modules and the electrical system was upgraded a few months ago.

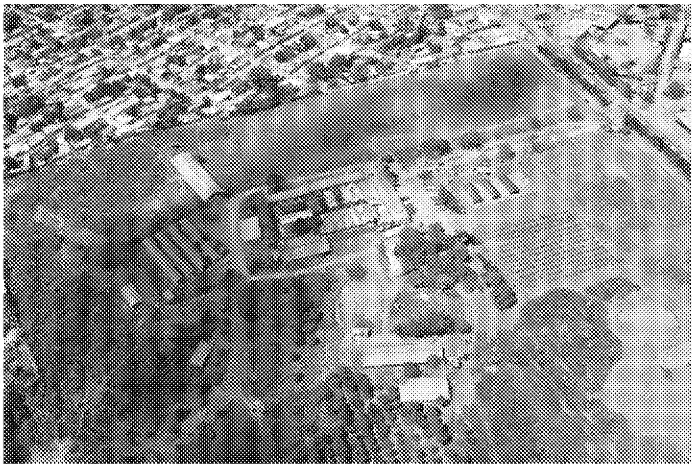
51. (b)(7)(C),(b)(6) states that it took about 10 minutes for the fire to spread from Module 6 to Module 10.

52. **Witness Statements:** An interview was conducted by Special Agents (b)(7)(C),(b)(6) (b)(7)(C),(b)(6), a resident of Module 3. (b)(7)(C),(b)(6) stated that on the night of the fire he was in Module 3 of the Comayagua Prison Farm. At approximately 10:30 pm he saw the fire start in the upper left hand side of module 6. He further states that it took approximately 5 minutes for the fire to spread from module 6 to 10.

BUILDING CONSTRUCTION

53. The following section of the report was authored by SA (b)(7)(C),(b)(6) The building construction was established by post-fire scene examination and information supplied by current occupants. For ease of comprehension, refer to Attachment "1" of this report for a diagram of the prison.

54. The Comayagua Farm Prison is a 1940's era complex that was designed as a model for an innovative prison farming community. The prison is located approximately 10 miles northwest of Comayagua on a tract totaling 44 acres. The gated entrance to the prison is on the north side of Central America (CA) Route 5 and a gravel road leads to the administrative building. The majority of the Prison Farm property is undeveloped and is available for farming operations. An eight foot fence secures the entire perimeter of the property. Numerous permanent structures are located outside the central prison walls and are intended for use with the farming concept. The prison, originally designed to house approximately 52 inmates per module, currently holds around 100 prisoners in many of the modules. At the time of the fire, 852 prisoners were housed in 10 prisoner modules. Entry to the central prison area is gained via gated doors on the northeast corner of the administration building. Visitors are secured in a small sally port before entering the inmates' area.



Aireal view of Comayagua Farm Prison

55. Due to the fact that the prison was still in operation at the time of the fire and inmates had access to the majority of the central prison complex, safety dictated that investigators could not conduct a complete examination of the buildings unaffected by the fire. The central prisoner detention area is enclosed by the administrative building on the east side. This building ran the length of the complex and contained the prison entrance, police dorms and the hospital. A 16' brick wall topped with concertina wire and a long narrow building containing additional dorms secure the south side of the complex. A 16' brick wall with concertina wire runs the entire length of the west side and two long rectangular buildings that house the cafeteria, conjugal rooms and office areas are situated on the north side. Guard towers standing 10' above the walls are located in the four corners.

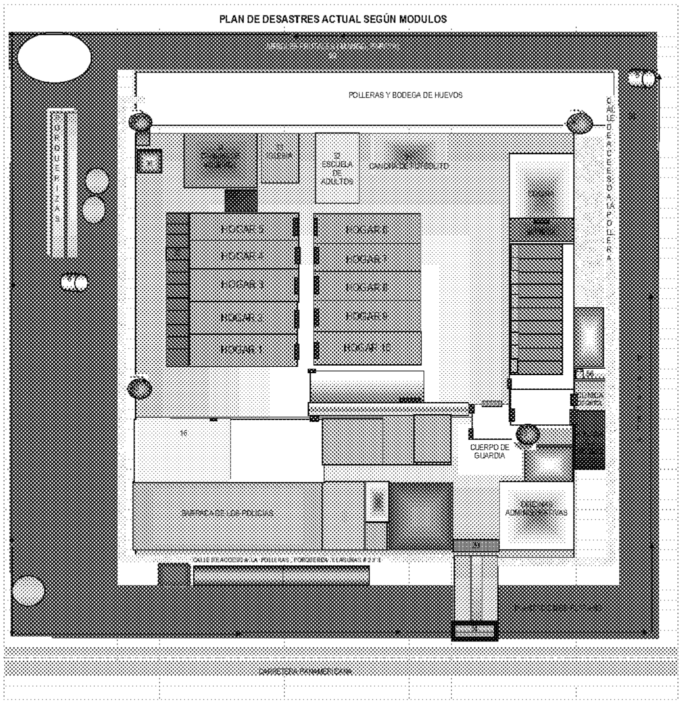
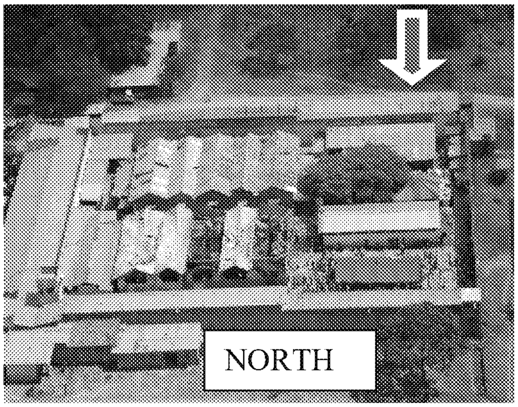
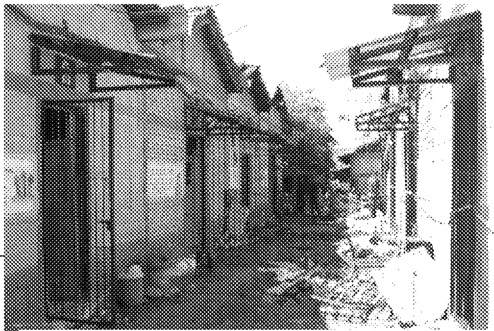


Diagram of Prison Complex; Module buildings in light blue in center of diagram; North is to the right

56. Two separate single story masonry structures run parallel to the administrative office and are designated as the prisoner housing areas. The two structures, identified as Modules 1-5 on the south side and 6-10 on the north side, are mirror images of each other. Each structure covers an area of 4,950 square feet. Although, it could not be confirmed through interviews, investigators believe that the original design held only six modules and Modules 2, 4, 7 and 9 were constructed at some later time. The two buildings, which measure 52 feet north to south and 96 feet 6 inches east to west, are separated by a 16 foot walkway. The buildings are 16 feet tall at the peak. Just to the east and parallel to Module 10 was a building that contained the bakery and the "Alcaldia", which served as the electrical room. The buildings were separated by a 52 inch wide concrete walkway. The pitched roof on the west side of this structure extended 24 inches past the wall line. This eave was approximately 16 inches below the level of the east side eave on Module 10 and the two roofs overlapped slightly. Two additional rectangular buildings were located to the west of the housing units and were used for religious services and included a school and a chapel. An open "yard area" located in the northeast corner is designated as a soccer field and a similar space in the southwest corner is designated as a volleyball field.



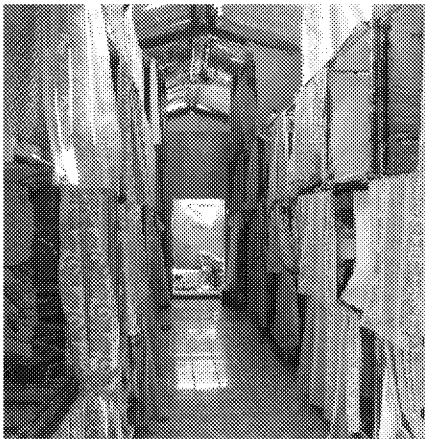
Overhead view of main prison complex



Central causeway separating module buildings

57. Modules 1-5 were examined and documented for comparison purposes. Modules 1, 3, 4 and 5 were constructed using numerous courses of 2.5 inch x 11inch bricks. Module 2 was constructed with cinderblock. The east and west walls had four sections of barred window

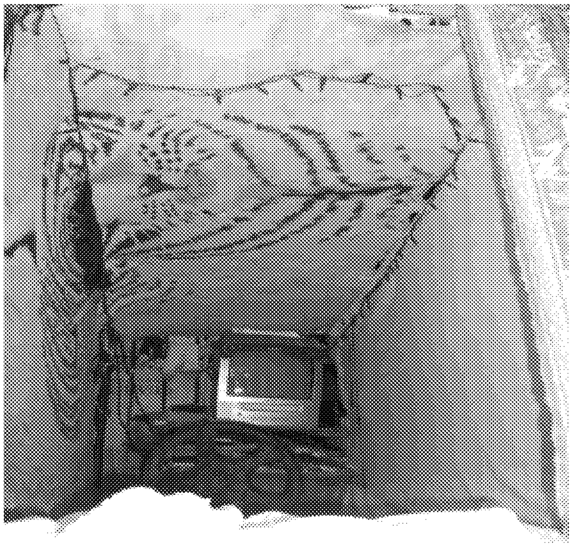
openings. The openings measured three foot high and nine foot wide. Tapered concrete columns separated these windows and supported a reinforced concrete beam at the top. There were no vent openings in the bathroom (rear) section of the east and west walls. The rear (south) wall of each unit contained a 40 inch high by 9 foot wide barred opening. All of the housing units were covered by a corrugated metal (tin) pitched roof that sloped toward the east and west and included a 30 inch overhang at the end of the building. The corrugated metal consisted of individual three foot by eight foot roofing sheets that were constructed of a thin gauge tin. The roof of each module drained into an aluminum valley that carried the water to the front and rear. The bricks and blocks were tapered to a gable end on the north and south sides. The roof eave overhung the gable end by 18 inches and was supported by 3" x 10" wooden members that were tied into the walls and secured to the first rafter. The gable end was finished off with a 12 inch tongue and groove fascia board. All of the units shared common interior masonry walls that contained 9' x 40" vent openings. These interior walls were constructed with a combination of brick, block and concrete. The interior wall widths also varied, but they were approximately 10 to 12 inches wide. The interior vent openings, located eight feet above the floor, were secured with ¾ inch steel bars. There was no glass in barred openings anywhere in the prisoner housing units. The front (north) wall of this complex contained five separate barred entrance doors/gates. Each door provided access to a specific module. The doors in Module 1, 3 and 5 measured 55" x 80"; the doors on Modules 2 and 4 were slightly smaller. The hinged sides of the doors varied by module, but all the doors contained a steel sliding bolt and were secured with a lock at 9pm. The lock was operated by a key and slid through a ring welded to the gate and to another welded to the bolt. A four foot shed style roof covered the door openings. The west wall of Modules 5 and 6 were three foot taller to accommodate the change in grade.



Interior of Module 1

58. Module 1 measured 18 feet wide by 50 feet long. The unit was filled with two rows of steel framed bunk beds. The beds were very tightly packed, with only a 30 inch separation after the first stacked bed unit and a 20 inch separation before the last bunk. The beds were stacked four high, with the top bed being 132 inches off the floor. There were 11 bunk units against the east wall and 12 bunk units against the west wall. An examination revealed that in most cases, two bunk bed units were welded together. This weld formed a unit that totaled eight beds. The bunks were separated by a 50 inch tiled floor. The remainder of the floor was finished with poured concrete.

59. The individual bunk beds measured 30 inches wide, 32 inches tall and 80 inches deep. To provide the inmates with some privacy, the majority of the individual bunks were totally enclosed with a variety of different style thin, light cloth materials. The materials used to construct the enclosure consisted of sheets, towels, bed covers and drapery type items. The cloth on the top, sides and back were sewn around the one inch steel vertical bunk frame. The drapery that enclosed the entrance was supported by a rope and could be moved from side to side. All bunks included a mattress that measured approximately 80' x 30" and was four inches thick. The mattresses were supported by 10, one inch wide, thin steel straps welded to all sides of the bed frame. The resulting grid pattern allowed air flow to most surfaces on each mattress. The mattresses appeared to have been constructed using multiple layers of a cloth material surrounding a polyurethane pad. Some inmates used cardboard or wood filler below their mattress. Individual bunk units included wood shelves for storage of electronics, clothing and other materials. The top bunk units measured approximately 60 inch from the bed frame to the ceiling at the front and 24 inches in the rear. An estimation based on evidence observed throughout the various modules suggests that there were 96 bed cubes in each module and each bed was surrounded with 65.5 square feet of thin cloth materials, equaling a total of approximately 6,288 square feet of cloth draped in each module. Additionally, each mattress measured approximately 5.5 cubic feet, equaling approximately 538 cubic feet of mattress pad in each module. Due to the orientation of these materials, most surfaces were exposed.


Typical combustible materials observed surrounding individual bunk beds

60. Three electrical branch circuits entered the module through the north side wall approximately four feet above the door. These branch circuits traveled south at the ceiling level on the east and west walls and along the peak of the ceiling. These conductors were enclosed in ½ inch PVC pipe. There were numerous "T "fittings in the PVC pipes. These fittings provided a pathway for the conductors to supply power to receptacles on the east and west walls. A duplex outlet was observed in the first bedding unit on the east wall. One plug, which was spliced to a very small gauge stranded wire, was inserted in this outlet. The wire was attached to the bed frame using sewing thread and wire ties and serviced an in-line light switch. An additional electrical cord serviced a fluorescent bulb that was hung from the cloth ceiling. Approximately one foot above the outlet, two wires were observed protruding from an additional "T" in the PVC pipe. These wires were stripped bare then covered with electrical tape.

61. A number of the bedding units had some type of electrical cords servicing lights, hot plates, fans, television, and microwave ovens. All of these electrical appliances were connected, directly or indirectly by the use of extension cords, to the receptacles on the walls. The electrical section of this report will detail the specifics of the electrical engineer's analysis.

62. The ceiling was visible from the floor and consisted of the bottom of the corrugated steel roofing. The roof was held in place by a system of four steel 4" x 6" rafters and four, 2" x 4" steel braces running perpendicular to the

rafters. The rafters, which ran east and west, were spaced every 16 feet and the support braces, which ran north and south, were spaced seven feet apart.

63. A masonry wall separated the living quarters from the bathroom. A 34" x 80" opening provided access to the bathroom. There was no door or door frame in this opening. This masonry wall was 12 feet tall, even with the exterior walls, and four feet below the roofline. The bathroom was constructed of non-combustible material and contained a cistern, two water sinks/tubs, two toilets, a bathing closet and a clothes washing table.

64. In comparison to Module 1, all south side modules were of similar construction and interior design. Subtle differences that could potentially affect fire growth, development and spread will be described in the following paragraphs. All modules contained a four foot porch roof over the entrance and a light was attached to the underside of this roof. Some of the roofs were constructed with tongue and groove planks beneath the corrugated metal covering. The electrical branch circuits entered the room over this roof and were contained in PVC pipe. All modules measured 50' on the interior and included a 40' living quarters in the front and a non-combustible 10' x 17' bath area in the rear. The rooms were separated by a block wall, usually 12' tall. The individual bathroom layout varied slightly between modules, but most contained a cistern, toilets, water sinks and bathing areas. The rear wall of the bath areas contained a 9' x 40" barred vent. The floors were poured concrete covered by ceramic tile in the aisle. In most of the modules, the first and last bunk areas were single 4 high stacks separated by a small open area from the next set of 2 wide by 4 high bunk stacks. The first, ground floor bunk area on the east and west side was often enclosed with a wood door and lock. These areas were occupied by the module captain. These oversized bedding areas often contained a refrigerator and the second bunk in the column was used for storage of "personal and store supplies". Numerous ladders, constructed of wood or steel, were secured with lag screws to the bunks. These ladders provided access to the upper bunks. There was no insulation or ceiling, so the underside of the roof was visible. The roofs were constructed of wood or steel rafters and 1inch x 6inch tongue and groove planks covered on the exterior by corrugated metal or simply corrugated metal roofing. Fluorescent and incandescent lights were attached at the roof level over the central aisle.

65. There was no natural gas service, no sprinklers or other fire protection systems in any of the prisoner modules.

66. Modules 2 and 4 were smaller in width but, very similar in basic design and construction to Module 1. These modules included approximately12 bunk units on each side of the aisle and most were four bunks high. Module 2 measured 15' wide by 50' long and had a 30 inch central aisle separating the bunk bed columns. The front wall of this unit was constructed of cinderblock and did not have any wood on the roof. The barred entrance door was also smaller measuring 39 inches wide. Since the bunk columns and the cloth enclosures remained similar in design to Module 1, the aisle between the bunks was much tighter. The bath area was used to hang-dry clothing. A 15 inch circular fan was hard wired and attached to the wall to assist with the clothes drying. A stack of wood was also stored on top of one of the bath stalls. Module 4 measured approximately 16' wide and the front brick wall included an entrance door that measured 46" x 82". The sleeping area was consistent with the other modules and the beds were separated by a 40 inch aisle. The roof in this module consisted of wood rafters with tongue and groove planks covered by a corrugated metal exterior roof. Numerous two foot long fluorescent light fixtures were attached to wood bracing approximately just below the roof. Coaxial TV wires

were observed running along the walls and rafters throughout the entire module. A curtain was hung at the opening between the sleeping and bath area. Additionally, the masonry wall between these areas terminated eight feet from the floor. An air conditioning unit was placed in this separation wall on the west side of the opening. The gable end of the roof was finished with a one foot overhang and wood fascia board.

67. Modules 3 and 5 were consistent with Module 1 in terms of overall size and layout. Both modules included a wood and metal roof as described in Module 4. Lighting and interior sleeping units were also consistent. A three foot aisle separated the bunk beds.

68. Modules 6 through 10 were located on the north side of the common walkway between the buildings. The design and layout of these modules was very similar to those on the south side of the walkway. As such, the details of the building construction will not vary too much from those described by the south side “sister” units.

69. Module 10 was directly across (north) from Module 1. These two modules were approximately the same size and layout. The exterior barred door to Module 10 was hinged on the right (east) side and measured 55” x 86”. The module measured 18’ wide. Inside the module, a four foot aisle separated the bunks. The bunks were stacked four high and most were welded at a shared center column to form one, two bunk unit. Along the east and west walls, the bunks were within two foot of the ceiling and one foot from the top of the barred openings. The vent openings started approximately 20 inches above the mattress of the third bunk. Electrical outlets were also located within four foot of the entrance door and then at various distances along the walls. The wall between the living quarters and bath area was even with the top of the interior wall. The bath area was consistent with those in the previously described modules. The roof in this unit was finished with corrugated metal only.

Orientation and position of bunk beds in relation to ceiling and vents

70. Module 9 was consistent in exterior design with Module 2. This module shared a common masonry wall with Module 10 on the east side and Module 8 on the west side. Four, 9’ x 40” vents, separated by 10 inch masonry columns, were included in each of the common walls. A one foot section of concrete separated the top of the window opening from the bottom of the wood/metal roof supports. The interior design of this unit was different than the rest of the modules. This unit contained only individual single metal framed beds. There were 11 beds located in the room. These beds included spring coiled mattresses. The room measured 15 feet 6 inches wide and a three foot aisle separated the single beds. Electrical outlet boxes were fastened to the east and west walls and the conductors were dropped vertically to these boxes. The masonry wall separating the sleeping and bath units was even with the top of the window opening. An air conditioning unit was located on the east side of this wall. Additional shelving units, TV monitors, refrigerators, fans and other appliances were also noted. The bath area was slightly different in that it included a shelf on the west side that was used for cooking. The roof in this unit was finished with corrugated metal only.

71. Modules 8 and 7 were consistent in size and design to Modules 3 and 4. Module 8 was slightly larger in width and was covered with a combination of wood and metal roof as described earlier. The roof and frame over Module 7 was constructed with metal. Both units had bunk beds, stacked four high, along the interior walls. The aisle in Module 8 was slightly larger than in Module 7. Both units had metal duplex outlet boxes along the east and west walls, but Module 8 had more outlets attached to the walls. Similar appliances were also noted in each unit. The bath separation wall in Module 7 was even with the bottom of the window opening.

72. Module 6 was similar to Module 5 in design and interior layout. The interior space measured approximately 18' x 40'. The exterior porch roof and interior building roof were constructed of wood and metal. A 2" x 6" wooden top plate was located at the top of the exterior masonry wall and was used to secure the rafters to the wall. The west wall barred window openings measured 36" x 40", four inches smaller than the interior window openings. The aisle separating the bunks was approximately four feet wide. There were 12 bunk beds, stacked four high adjacent to the east and west walls. As with most of the other modules, there was a separation between bunk beds 1 and 2. This same pattern was again observed at bunk beds 11 and 12 on both the east and west walls. The space between the beds varied, but it typically measured between 20 to 30 inches wide. There were two metal outlet boxes attached to the walls in this area on each side. There were an additional seven outlets on the west wall and three outlets still affixed to the east wall. The interior masonry wall adjacent to the bathroom stopped at the top of the window opening. The bath area was similar in construction to the modules previously described.

SCENE PROCESSING

73. The scene processing was conducted in a systematic method; the examination progressed from areas of least damage to areas of greater damage with emphasis on recognition, identification, and analysis of fire and heat patterns. Throughout the scene investigation, the steps of the scientific method, as described in National Fire Protection Association (NFPA) 921, were utilized. Once the investigators arrived at the scene, facts and data related to the origin and subsequent cause of the fire were gathered. These facts and data included witness statements, arc mapping, analysis of fire patterns, and fire dynamics. Hypothesis were developed and vetted, resulting in a final hypothesis being developed and tested by the investigators.

74. On Friday, February 17, 2012, members of the ATF International Response Team (IRT) met with members of the Comayagua Fire Department, Ministerio Publico, and the Soto Cano (US Military) Joint Task Force (JTF) - B Fire Department; at which time a briefing was conducted outlining the response to the fire, the recovery of the remains and the scene investigation to date. The briefing was held in a tent outside the Pentenciaria Nacional Comayagua. At the conclusion of the briefing, a plan was made relating to how the investigation would ensue from that point onward. Two teams were identified; a scene team and an interview team. Each team was comprised of representatives from the various participating agencies.

75. After the briefing, the scene investigators went into the prison to inspect the modules building. The modules encompassed two free standing buildings, each similar in appearance to the other. The first building was the southern of the two buildings and included modules 1-5 sequentially from east to west. This building sustained very little fire damage, and the damage that was present was to the front (north) exterior of the building, which faced the northern building containing modules 6-10. This building was located approximately 16' from the

northern building and housed modules 6-10, sequentially from west to east. The northern building was the building in which the fire occurred.

76. The northern building housed modules 6-10. This building sustained the fire damage resulting in a total loss of almost all combustibles within the structure. This building is also where all the victims had been located.

77. After conducting an initial assessment and determining the extent of the damage, the fire investigators concluded the day. The area was secured over night by the prison guards.

78. On Saturday, February 18, at 9:00 am, the investigative team met at the aforementioned tent for a morning briefing, which included a safety briefing. After the briefing, the scene team was escorted into the prison walls, while the interview team stayed and scheduled interviews.

Modules 1-5

79. By utilizing the systematic method, the fire investigators began their scene investigation with an inspection of the building that housed Modules 1-5. This building was located to the south of a central walkway that separated the two module buildings. The investigators walked through modules 1-5 and discovered no thermal damage to the interior of the units. The inspection of these modules did provide the investigators with a general knowledge and understanding of the typical module layout and the combustible materials that were contained within and around the individual bunk beds.

80. The exterior of modules 1-5 were inspected, beginning at Module 1 and progressing toward the west. No thermal damage was observed to the exterior of Module 1. A broken lock was observed lying on the ground immediately outside the gate. No thermal damage was observed to the exterior of Modules 2 or 3. A small wooden “shop” was positioned along the front (north) between Modules 3 and 4. According to witnesses, these “shops” were operated by the inmates. These “shops” were small stands, approximately three feet high, where inmates would sell various items. This particular “shop” was comprised of wood and metal. Lightweight wooden slats ran along the lid of the “shop”, which was in the open position. Cray paper type decorative strips were located along the top and sides of the “shop”. This thermally thin material sustained minimal thermal damage.

81. The exterior of Module 4 exhibited indications of thermal insult. The peak of the gabled roof extended to the north and over the exterior, masonry wall. The roof of this module was comprised of wood and had wooden rafters that also extended past the exterior wall. The rafters and the wooden members sustained burning and charring. Corrugated sheet metal (tin) was positioned over the roof in this module. The tin exhibited oxidation resulting from thermal exposure. The masonry wall was smoke stained at the upper levels near the roofline. The smoke staining diminished in a downward progression. There were television cable wires strung along the face of the exterior wall that entered into the module near the apex of the roof. The insulation of these cables had melted as a result of the heat exposure.

North facing exterior of Module 4

82. A metal awning extended over the prison gate that led to Module 4. This awning was supported by angle iron that extended from the exterior wall. The awning and angle iron showed signs of heat exposure in the form of discoloration and oxidation. The damage was to the west side of the awning and diminished as you progressed toward the east. This damage was consistent with fire venting out of Module 6, which was to the west and north of Module 4, and consistent with the prevailing wind that was present the night of the fire.

83. Module 5 had similar thermal damage to the exterior walls as did Module 4, at the front (north) facing side. There was light smoke staining to the upper levels of the masonry wall and charring to the roof structure. The roof system to Module 5 was similar to that in Module 4; it too had a wooden roof with tin over it. The wood had begun to char. There was mass loss to the wood structural members at the apex of the gable, the charring and smoke staining diminished as you progressed downward from the apex to the lower levels of the overhanging roof. A metal awning was also located over the gate securing Module 5. The angle iron was smoke stained. Module 5 was located directly across from Module 6.

Exterior wall of Module 5

84. The western side of Module 5 comprised the exterior wall for the entire building. This side of the wall had the wooden roof overhanging approximately 30 inches past the exterior wall. This section of the wall sustained smoke staining and light thermal damage to the section that was located in closest proximity to Module 6. As the wooden overhang extended toward the rear (south) of the building, it sustained progressively less heat and fire related damage and appeared to be pristine.

85. After the inspection of modules 1-5, the investigators were able to rule out any fire originating in that building.

86. While members of the investigative team were conducting the above described examination, SA/CFI (b)(7)(C),(b)(6) with aviation support from the US Army, was able to board a helicopter and take the aerial photographs.

Modules 6-10

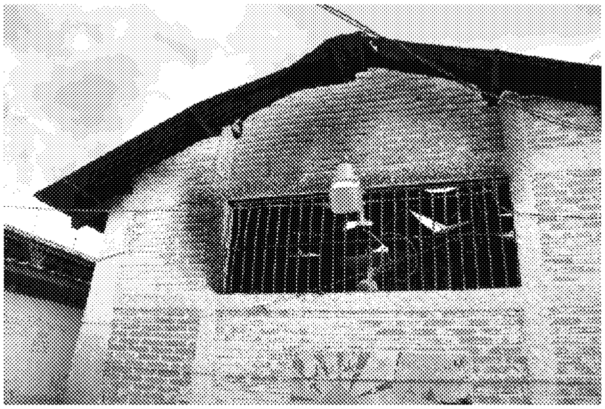
87. The building that housed modules 6-10 was then inspected. Whereas the first building had the modules progressing from 1-5 from the east to the west, the second building had the modules progressing from 6-10 from the west to the east.

Exterior inspection

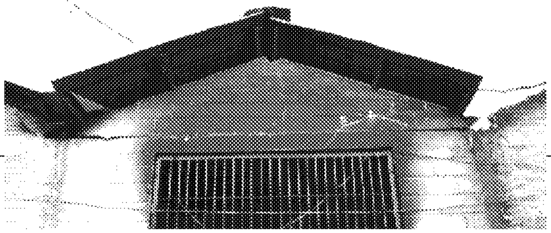
88. The exterior of the building was inspected. Due to security concerns, the investigators were able to view the exterior sides of the building only after additional guards were brought in and the prisoners were moved from the area. Due to this, the exterior observations were completed from west to east.

89. The rear (north) of the building was the first side of the exterior of the building inspected. The rear of the building had five vent openings within it. Each opening was approximately the same size and each was a large, barred window measuring approximately nine feet wide by 40 inches high. The windows were located approximately 11 feet above the grade on the outside of the building. Each of these openings served as the window for the five module's bathrooms, but none of them contained glass in its pre-fire state. These windows were located below the pitched, gabled roof. In each case, the eave of the roof extended over the exterior wall so all the roofs were affected by the fire.

90. Beginning at the east end of the building, the first opening related to Module 10. There was smoke staining above the opening that extended to the apex of the roof. The smoke staining was greater to the eastern side of the window when compared to the western side of the window. There was a clean burn pattern located above the window towards the center. This is generally indicative of actual flame impingement upon the wall itself. As the flame impinges upon the wall, it removes the soot and smoke staining that had previously adhered to the wall. The roof was metal above this module. The metal had been impinged by the hot gasses and fire escaping from the vent/window opening. This thermal insult resulted in oxidation to the metal as well as slight distortion. The masonry bricks at the top of the wall, where the apex of the gabled roof was located had lost some of the bricks. The investigators did not know if this damage was a result of the fire and/or had been this way prior to the fire occurring. All the fire patterns were consistent with fire venting from the interior of the building to the exterior.



Bathroom window to Module 10

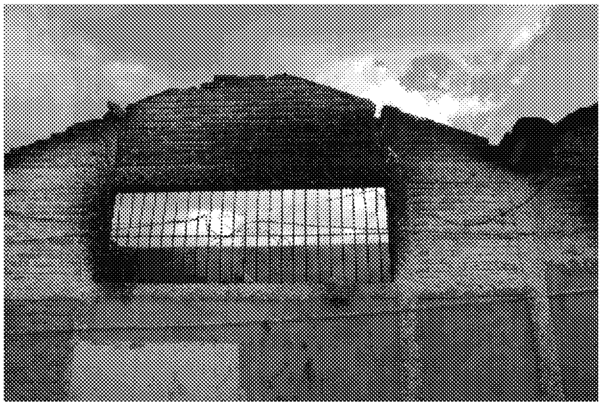


Bathroom window to Module 9

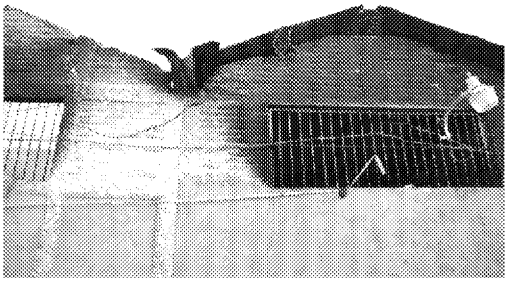
91. Progressing to the west, the next opening corresponded with Module 9. This opening was in the same proximity and measured approximately the same as the opening in Module

10. The exterior walls of this module were not brick; but were cinderblock. The window had smoke staining above it to the apex of the roof. Unlike the previous window in Module 10, this window had equal smoke staining to its west and east sides. The roof above Module 9 was metal and had a great deal of smoke damage. There appeared to be little actual fire damage to the section of the eave that overextended the exterior wall.

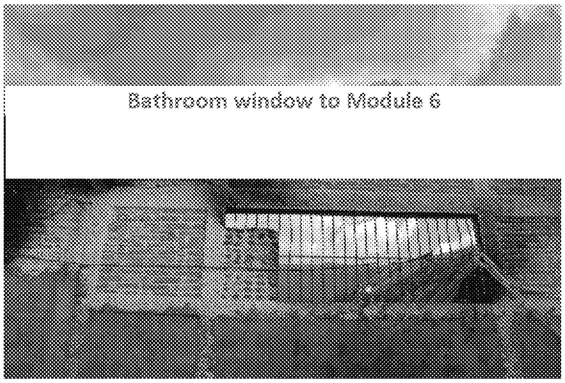
92. The next opening was the center opening, which corresponded with Module 8. This opening had smoke staining above it and around the window. The smoke staining appeared to be greater on the upper west side and to the lower east side. This damage was consistent with smoke billowing out of the vent in a vortex. There was smoke staining to the brick wall above the window. The roof above Module 8 had been a wooden roof. Due to this, there were no remains of the roof observable from the exterior of the building at the time of the investigation. The wooden eave that would have extended over the exterior walls had been consumed and/or collapsed inward into the building. The upper course of bricks was missing. It was unknown if this was a result of the heat created by the fire or a preexisting condition of the prison.


Bathroom window to Module 8

93. Continuing to the west, the next opening was related to Module 7. There was smoke staining above and around the sides of the opening. There was greater smoke damage to the area around this opening when compared to the previously described openings. The smoke damage extended above the window to the apex of the roof but also extended outward approximately one foot in either direction. This entire area was smoke stained. The roof over the module was metal and showed signs of heat and fire impingement. The roofing material was oxidized and slightly deformed.

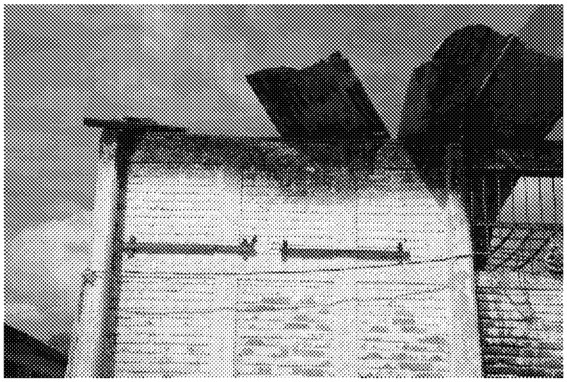

Bathroom window to Module 7

94. The final opening on the back (north) of the module building was the opening that led to Module 6. This opening had the least amount of visible smoke damage surrounding it. The area above the window had only slight smoke damage and this was concentrated to the east. The western side of the window has some additional smoke staining too it. The fire investigators determined this to be due to the clean burn issue as previously described. The area above the window showed evidence of a large amount of flames venting from it, and as such, the flames consumed the smoke staining from the exterior wall. Smoke staining is caused by the deposition of unburned product of combustion onto a cooler surface. Heavy thermal impingement by open flame can burn or "clean" smoke staining off a surface by completing the burning process. This leaves a thin white ash layer that appears as a clean, soot free area as opposed to dark soot staining. These flames had extended to the roofline above the window. The roof above Module 6 had been a wooden roof and as such, the remains of the roof had either been consumed and/or collapsed into the interior of the module. The wooden eave that would have extended past the exterior wall was gone. The exterior wall was comprised of bricks and the upper course was missing some of the bricks.


Bathroom window to Module 6

95. The fire patterns to the exterior (north) wall indicated to the fire investigators that the fire was greatest to Module 6 when compared to the five openings within the wall to the east. The window in Module 6 showed the greatest signs of clean burn damage. Module 7 showed the greatest amount of smoke venting from it. The damage appeared to decrease progressing eastward to Module 10. No information as to fire origin was developed related to the roofs due to the fact that there were two dramatically different roofing structures utilized over the various modules. These different roofing structures, namely, metal versus wood overlaid with metal, react differently to heat and thus were not good indicators as to the origin of the fire in this investigation.

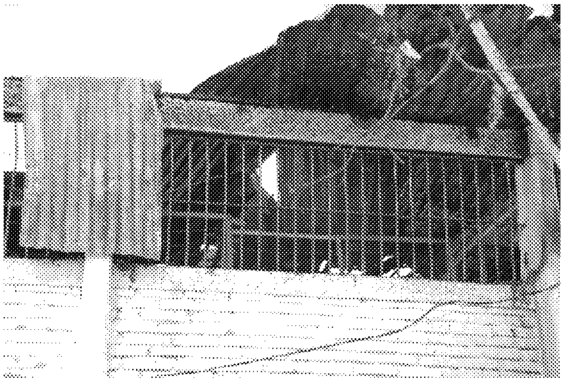
96. The fire investigators continued their exterior inspection of the building by viewing the western side of the structure. This western wall corresponded with Module 6. The exterior wall was comprised of brick and was slightly above grade. There were sheets of metal, which had been over the wooden roof, lying on the exterior wall. There was smoke staining along the upper section of the wall where it had joined the roof. The damage was present along the entire length of the roof and not just above the window openings. This smoke staining was due to the pressure created by the smoke at the upper levels of the module. As the smoke continued to rise within the module, the upper layer became pressurized and this pressure forced the smoke out between the small cracks that existed between the exterior wall and the roofline.


Smoke damage at interface between western exterior wall and roofline

97. There were four windows/vents along the upper section of the west wall of Module 6. Each of these vents was a barred, prison window. There was no evidence of glass or any other permanent material enclosing the

openings. The wall had four openings within it; each appeared identical in size to the other. In each case, the openings were approximately nine feet wide by three feet high. There was smoke damage above each. Most of the smoke staining had been consumed due to clean burn as previously discussed. There appeared to be uniform smoke and thermal damage around and above the four windows.

98. A cement header was located above each of the four windows. This header was approximately 12 inches in height. The header above each window sustained spalling, which is the chipping or pitting of concrete or masonry surfaces. *Spalling* is generally related to the rapid heating and/or rapid cooling of a material. The spalling is caused by pockets of air or water in the cementatious material that expand quicker than its surrounding material during either the heating or cooling process. As these materials heat and/or cool at different rates, they expand or contract quicker than their surrounding materials causing pitting or chipping of the surface.


Cement header above windows in western exterior wall of Module 6

99. A tree was positioned to the west of the module building. The tree's limbs extended upward and grew toward the module building. The tree had sustained thermal damage to its upper limbs and sections of its trunk. The limbs and attached leaves that were closest to the module building were charred and, in the case of the leaves, consumed. The side of the tree that was away from the module building had survivability of the bark. The limbs and leaves further away from the module were still in place and green. The damage to the tree was consistent with heat progressing from the module building.

100. The eastern, exterior side of the building was inspected. The eastern wall of the building corresponded with Module 10. Like the western wall, this wall had four vents/window openings in it. Each of the windows was a barred opening and was located near the top of the wall. Like, the western wall, each opening was approximately nine feet wide by three feet high. There was smoke staining above each of the windows as well as to the sides of the windows. Unlike the western wall, the eastern wall had a metal roof overhang above it. The metal roof had an eave that extended approximately 18 inches over the window. The eave was supported by metal rafters that also extended past the exterior wall. The metal roofing was oxidized and sustained some deformation. An "administration building" was located about four feet to the east of the exterior wall. This building was about ¾ the height of the module building, and as such, the metal roofing material that was over the administration building was located near the center of the window opening. Due to this, there was thermal damage to the roofline of the adjoining building. This damage is discussed in the section "Fire Progression to Other Buildings" below. The damage to the eastern and western exterior walls was compared. The damage to the western wall and its openings, in comparison to the eastern wall and its openings, showed much more thermal damage. This comparison indicated that there was more fire damage to the western side of the building; which corresponded with Module 6.

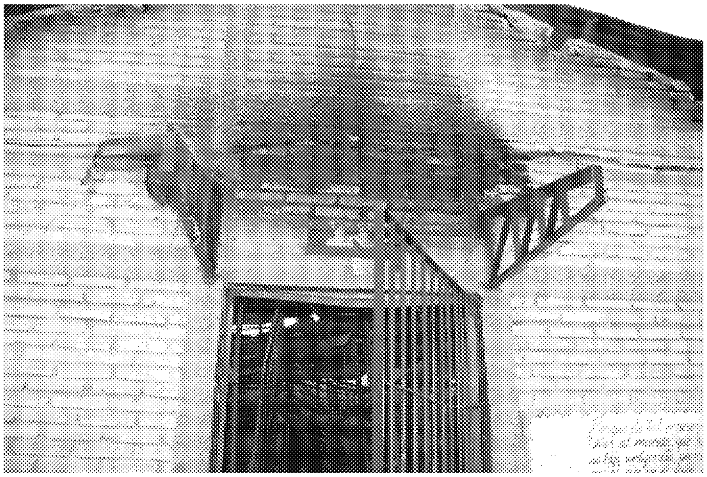
101. The fire damage to the front (south) of the building will be discussed below as the investigators moved from module to module.

Interior Inspection

102. An overall, cursory, visual inspection of the thermal damage to the interior of the modules 10 through 6, initially revealed that there appeared to be uniform damage to all the cells. Since the damage appeared to be uniform, the investigators relied on the witness statements and the aforementioned exterior fire patterns in a determination as to how to continue in a systematic method. The exterior fire patterns documented and all witness statements indicated that the fire began in Module 6, based on this, the investigators continued their investigation by moving from Module 10 back to Module 6.

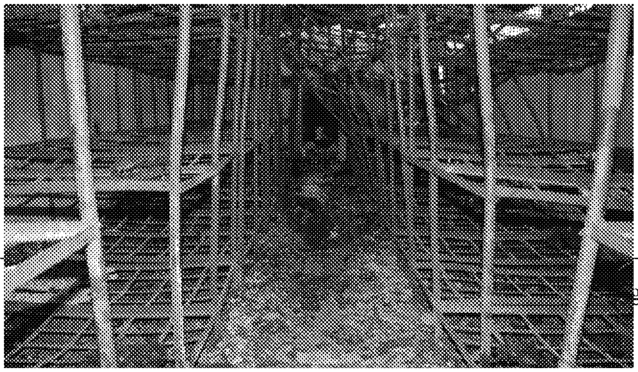
103. While conducting the cursory walkthrough of the modules, the investigators found that there were still some human remains located within Module 6. This was pointed out to the investigators that represented the Ministerio Publico and they returned to the scene and collected the various bones and other human remains. The investigators also found that the bathrooms in all five of the modules were still full of water and human fluids. A request was made to drain the bathrooms prior to inspecting them. Due to this, the bathrooms related to Modules 10-6 were not inspected until the third day of the investigation.

104. Module 10 had fire damage to the area above the front door that led into the module. A metal awning had originally been positioned over the door. The awning was supported by angle iron that extended from the exterior wall outward. The awning had been consumed and/or collapsed during the fire and was no longer in its original position. The angle iron was oxidized. Smoke staining was present in and around the area where the awning had originally been located. There was also smoke staining to the upper ends of the exterior wall where they came into contact with the roof. This smoke damage was due to the pressure of the smoke building up within the module. The pressure built up enough that the smoke was pushed out through the existing cracks in the walls where the wall and the roof joined together. The metal frame that secured the door was still in place. There was oxidation to the framing with the damage decreasing progressing toward floor level. The top section of the metal distended slightly downward. The vertical supports, on both the east and west side were still affixed to the wall. Of note, is that the bunk beds on either side extended past the door frame and thus protected the two vertical supports.



Exterior front of Module 10

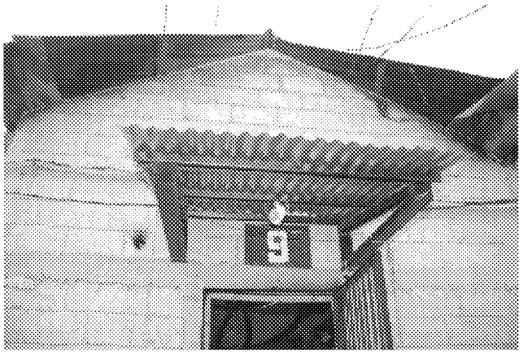
105. The interior of the module appeared to have uniform damage throughout. As in all the modules, there were metal bunk beds stacked four-high along the east and west walls. All the bunk beds were oxidized, but they were all still standing. In all



Interior of Module 10 taken from front gate cases, the two upper bunks in each column appeared to be distended downward with slightly greater damage progressing toward the rear of the module. This damage is believed to have been caused by these beds having been located in the upper gas layer for an extended period of time. The damage to the bunks toward the rear is believed to be related to a lack of venting of the hot gasses allowing the gasses to remain in contact with the upper beds for a longer period of time. The bottom two bunk beds also distended downward, but to a much lesser degree than the upper beds. Bunk bed columns 6-9 on the east side of the module were bent inward toward the center aisle and had come to rest on their mirror opposites across the center hallway. All the combustible materials located within the module had been consumed or damaged to such a degree that it was reduced to ash. All four walls of the module showed similar damage. The bars in the east and west windows were oxidized but still in place. Some of the bars in the western opening were spread outward. The investigators looked through all the other modules and found that this was the only opening where the bars were spread in such a manner. It is believed that this damage had no relation to the fire and was a pre-existing condition in the prison.

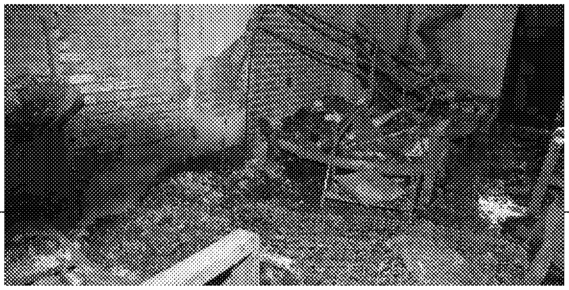
106. The roof above Module 10 was a metal roof supported by metal beams. The metal beams had distended downward, bowing toward the center of the building. The metal roofing material was still in place, attached to the beams, and appeared to have uniform oxidation damage to its entirety.

107. Module 9 was inspected next. The front exterior was photographed and inspected. The metal awning above the door was in place and positioned atop the angle iron supports. There was minimal smoke staining above the door opening and no thermal damage to the awning or its supports. There was light smoke staining at the top of the exterior wall where it came into contact with the metal roof. This staining was due to pressure in the module that forced the smoke outward. The metal roof over the module was smoke stained and oxidized. The metal framing around the front door was in place and oxidized. The metal was not malformed and showed no indications of distending.



Exterior (front) of Module 9

108. Unlike all the other modules within the two module buildings, Module 9 was a "special housing unit". Information pertaining to how someone was assigned to this unit was not provided to the investigative team at the time the scene was processed. This module had only single beds within it. There were a total of 11 beds in the module, six on the west side and five on the east side of



Inside of Module 9, with only single beds depicted the module. This was also the only module that appeared to actually have full mattresses with springs within. The other modules had small mattresses that were made of polyurethane and contained no springs. The module also contained a number of other "luxury" items such as flat screen televisions, larger refrigerators, an in-wall air conditioning unit and two cook stoves in the bathroom area. Many of the areas also contained shelving units either affixed to the wall or located along side the beds.

109. The unit appeared to have sustained uniform damage throughout the room. All the beds appeared to have uniform damage to them. No combustible materials survived the fire.

110. The roof above the module was a metal roof with metal beams supporting it. The beams and attached roofing material had bowed inward. The greatest deflection inward was at the center of the module. The vents/window openings on the east and west side had comparable damage.

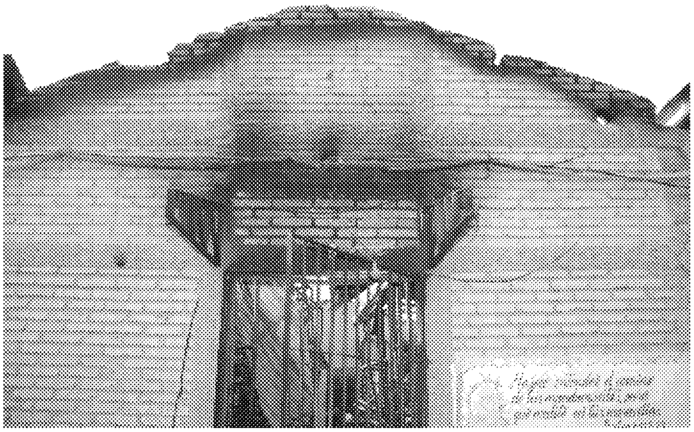
111. At this point, the investigators ended the scene examination for the day. A briefing as to the findings of the scene team and investigative team was held outside the prison walls. The modules were closed and secured. Security for the scene was provided by prison guard staff.

112. At the end of the day, it was requested that all extraneous materials, not related to the scene in its pre-fire condition, which were located in the central walkway that separated the two module buildings be removed. These materials included the plastic wrapping for the body bags that had been used, the rubber and plastic gloves that the first responders had utilized during their recovery operations, as well as other trash not associated with the fire. Investigator (b)(6),(b)(7)(C) Comayagua Fire Department, took command of this operation and had his people remove all the aforementioned materials.

113. On Sunday, February 19, at 9:00 am, the investigation teams met outside the prison and conducted a morning briefing outlining the day's operations. After the morning briefing, the scene team conducted a safety briefing and then entered the prison.

114. The central walkway had been cleaned the evening before as requested, with the removal of all non-requisite materials that were not associated with the fire scene. The investigation of the modules affected by the fire continued.

115. Module 8 was next inspected. The front façade above the entrance door showed visible fire damage that had vented out the door. The area directly above the door was smoke stained and exhibited areas of clean burn. The metal awning that had been located above the door had been either consumed or collapsed to the ground, but was not in its pre-fire position. The angle iron showed signs of thermal damage in the form of oxidation and discoloring. The top of the exterior wall, where it had joined the roof, was smoke stained. The roof had been a wooden roof and had been consumed during the fire. There was smoke staining to the areas where the wall and the roof had joined. A number of bricks at the upper course were missing from the wall.



Exterior (front) of Module 8

116. The metal framing that surrounded the opening and allowed the gate to secure was still in position. Similar to Module 10, the vertical uprights were protected by the ends of the bunk beds that were located on either side of the module. The upper portion of the metal framing had detached from the masonry and was distended downward. The entire metal framing was oxidized, with the oxidation progressively decreasing downward toward the floor.

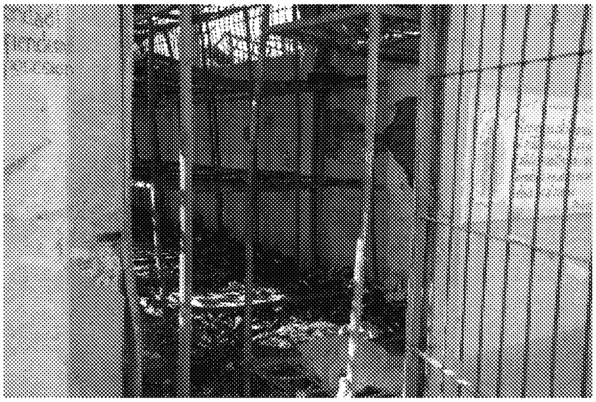
117. This module had four-high stacks of bunk beds on either side of the module. All the bunk beds were made of metal and all had fairly uniform thermal damage to them. The framing to the upper two beds in every stack of beds had distended downward toward the floor. The bottom two beds had also distended downward but to a lesser degree than the top two beds. More damage was observed to the frames of beds 6, 7, 8 and 9 on both sides. The damage was from the top down, but more significant to the top two bunks. The damage was slightly greater on the west side. This unit also was altered during the recovery efforts. Numerous bunks on the west side were cut and moved and the rafters were gathered and stacked against the bunks along the west side. Moving toward the rear of the unit, the bunks along the bathroom wall showed less evidence of thermal distortion. All combustible materials within the units had been consumed.

118. The roof over the unit had been a wooden roof with corrugated metal (tin) over it, supported by wooden rafters. The ceiling and roof had been consumed during the fire. Some of the larger pieces of the rafters had survived but they had sustained a great deal of mass loss resulting in only small sections of the rafters remaining. Although some of the rafters had been moved, the rafters toward the rear of the module showed more mass than those observed in the center and front. With the loss of the wooden roof, the tin had collapsed into the module, most of which had come to rest on the upper bunk beds. The metal was inspected and appeared to be uniformly damaged throughout the module.

119. Module 7 was next inspected. The exterior wall to the module showed indications of fire damage. The area above the door was smoke stained and the metal awning was not present in its pre-fire position. There was a clean burn pattern around the area where the awning had been located. There was smoke staining to the upper sections of the exterior wall where the pressurized smoke had emitted. The roof over the unit was a metal roof,

which was still in place. The section of the roof that extended past the exterior wall was oxidized and smoke stained.

120. The metal framing around the gate opening was severely oxidized. The oxidation extended to the floor. The vertical uprights were more protected than the other units due to the thermal shadow afforded by the foot of the bunk beds, since this module appeared to be narrower than any other unit. The ends of the bunk beds extended well into the doorway on either side. Whereas most modules had approximately three to four feet between the two rows of bunk beds, Module 7 had only about 24 inches. Although the vertical uprights were protected, they had been impacted by sufficient heat to pull them away from the cement walls. In regards to degrees of damage, this door frame appeared to have sustained the greatest amount of thermal damage when compared to the framing in doors leading to Modules 8-10. The investigators attributed this to have been exposed to the heat for a longer time.



Framing around opening to Module 7

121. The roof above Module 7 was a metal roof with metal supports. The metal roofing material was equally oxidized throughout the module. The metal supports had lost their tensile strength due to heating and had bowed inward. The bunk beds had also been subjected to a great deal of heat resulting in the beds bowing downward. The damage to the frames in this room was fairly equal with the exception of frames seven and eight on the west side. These frames softened and pulled inward collapsing to the second and third bed cell level. The damage to the bed was less evident at the floor level beds. The interior walls appeared to be equally damaged. All combustible materials within the unit had been consumed during the fire. The wall separating the front room and the bathroom was only 8 feet tall.

122. Prior to moving to Module 6, the fire investigators inspected each of the bathrooms related to Modules 10-7, beginning with Module 10's bathroom.

Bathrooms

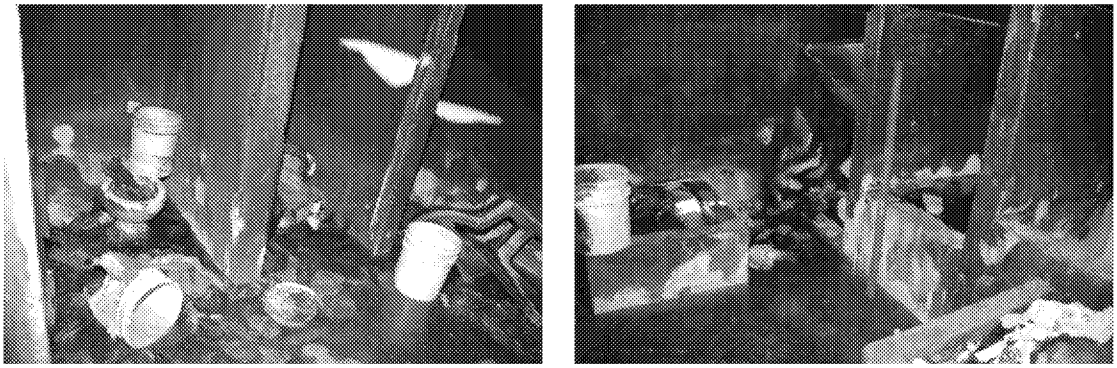
123. All the bathrooms were located at the rear (north) of the module. All the bathrooms, with the exception of Module 9, were identical in fixed features. Each included non-combustible fixtures, to include: a cistern, two water sinks/tubs, two toilets, a bathing closet and a clothes washing table. The walls that separated the bathroom from the living areas were comprised of masonry material, but differed in their heights. In all cases, the wall stopped short of the apex of the roof, creating an opening above the wall.

124. Module 10's bathroom was the first inspected. At the time of the inspection it was not possible to completely drain the bathroom due to structural issues with the building. The water had drained sufficiently to allow the investigators to evaluate most of the room. The two toilets were located along the west wall of the bathroom. The toilets were separated by permanent cement walls, but they had no doors on the stalls. In this bathroom, there were actually ceramic toilets in the stalls. An in-ground cistern was located along the northern

wall in the center of the room. This provided continuous flowing water to the module. To the right (east) of the bathroom were the open bathing areas. These had protected areas along the walls up to about the three foot level.

125. The walls in the bathroom were smoke stained to floor level, with the exception of the bottom two feet, which were protected. There were clean burn patterns on the wall surfaces at the upper layers, especially around the barred, window openings along the south wall.

126. There were some lightweight materials still present in the lower areas of the room such as plastic 5-gallon pales and plastic chairs. These items were unburned.



Module 10 bathroom; left photo depicts west side, right photo east side

127. The protected items within the bathroom, including the aforementioned lightweight combustibles, as well as the lower sections of the walls, were protected by the many decedents that had been found in the bathrooms. In Module 10, approximately 90 people had died. By viewing the photos that were taken prior to the body removal, the great majority of the deceased had grouped in the bathroom area. Their bodies had acted as a thermal protection for the combustible materials as well as the walls.

128. Module 9's bathroom was next inspected. This was the "special housing unit" module and, as such, it had a different bathroom configuration than the other modules. This bathroom had the toilets along the rear (north) wall and each had a door on them to provide privacy. A sink was located in the northeast corner of the room. A counter was along the northern wall to the west of the doorway. This counter had two cook stoves on it at the time of the fire.

129. They were unable to drain the water and subsequent fluids from the bathroom so access was limited. The smoke layer was to the ground and there was clean burn around the window along the western wall. Like the other bathroom, there were protected areas where the bodies had been recovered. All the actual fire damage appeared to be high in this room.

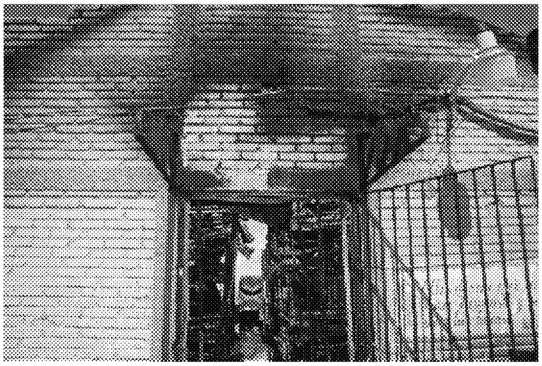
130. Module 8's bathroom was next inspected. This module had a separation wall between the living quarters and the bathroom that extended above the bunk beds. The damage in this bathroom was commensurate

with the damage described to the bathroom in Module 10. By viewing photos that were taken immediately after the fire, there were a large number of deceased in this bathroom, which accounts for the protected areas at floor level. The bodies were stacked approximately three to four feet high.

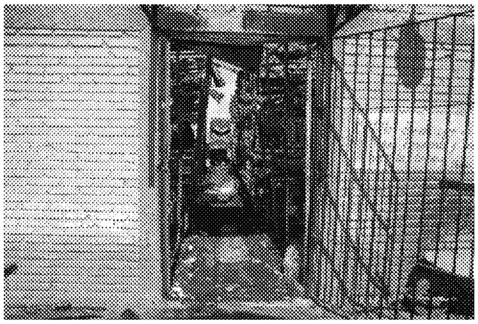
131. Module 7's bathroom was then inspected. Again, the damage in this bathroom was commensurate with the damage in Modules 10 and 8. The protected areas in this bathroom extended even higher to the three to four foot level. Photos taken after the fire showed that as many as 50-60 bodies were recovered from this area. The wall that separated the living quarters from the bathroom was eight feet high.

Module 6 - Area of Origin

132. Module 6 was the final module inspected. The exterior, south-facing wall of the unit was inspected. There was smoke staining above the door with a definitive clean burn pattern on the wall. This clean burn pattern was larger than the patterns above the other doors and extended past the location where the metal awning had been positioned. At the time of the investigation, the metal awning was not in its pre-fire position. The angle iron that supported it was smoke stained and oxidized. The smoke staining to the wall extended upwards to the apex of the gable. There was smoke staining around the upper sections of the wall where the pressurized smoke had been forced outward. This module had a wooden roof prior to the fire. The roof had been consumed and/or collapsed during the fire.


Exterior wall to Module 6

133. The metal framing around the door opening was inspected. This door framing sustained the greatest amount of thermal insult when compared to the other remaining module doors. The framing was oxidized its entire length and height. The vertical member located on the west side of the door opening was pulled away from the wall as was the upper section of the framing.

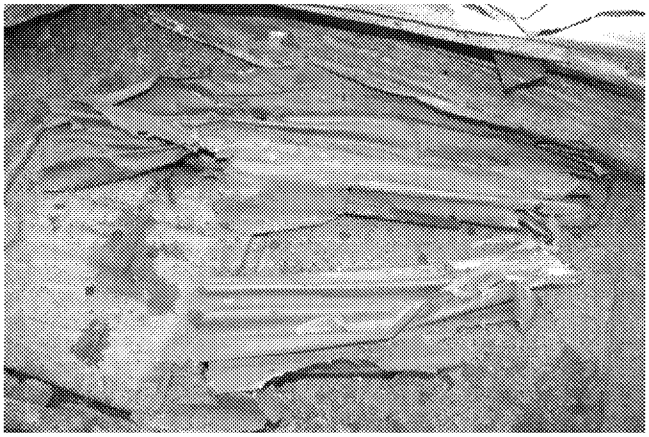

Metal framing around opening to Module 6

134. The interior of the module had four-high bunk beds aligning both the west and east side of the module. These modules extended from the front door to the rear of the unit where an interior wall separated the living quarters with the bathroom. The metal framed beds appeared to have uniform thermal damage to them. The beds were oxidized evenly throughout the module. The two upper bunk beds distended toward the floor more so than the two lower bunk beds; although all beds had a slight downward distention.

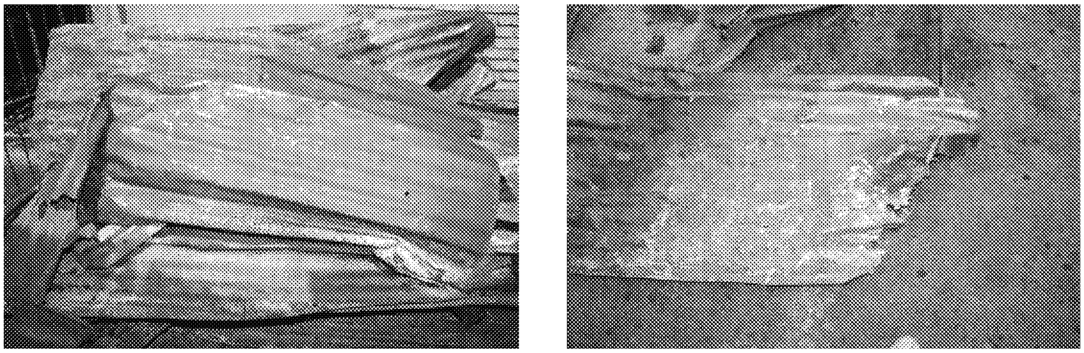
135. Based on the witness statements and the exterior observations made to this point in the investigation, the investigators determined that this was the module where the fire had originated. Due to this, it was determined

to begin the inspection of the module by removing the metal roofing material and the remains of the wooden rafters from throughout the module. As previously stated, this module had a wooden roof supported by wooden rafters. During the fire, most of the wooden roof had been consumed by the fire. What did remain were small sections of the thick rafters. In Module 8, which also had a wooden roof, sections of the wooden rafters had also been recovered. This was true in Module 6 also, but there was much less remains of the rafters when compared to the rafter remains from Module 8. Above the wooden roof had been metal sheeting. When the wooden roof had been consumed, this metal sheeting material had collapsed inward and was found lying on the bunk beds and in the center aisle.

136. The remains of the metal roofing material were removed. The investigators noticed that, for the most part, the roofing material was uniformly damaged. This damage was in the form of oxidation. The exception to this was three pieces of roofing material that were found above the third, fourth and fifth columns of bunk beds, along the western wall of the module. The metal sheeting in these areas sustained a greater degree of thermal damage than the other sheeting. The most severely damaged section was the metal roofing found directly on top of the fourth column of beds. This section of roofing material was much more oxidized than the other sections. The corrugated metal was partially consumed and what was remaining was fragile to the touch. The corrugated metal recovered above the third and fifth column of bunks was the next greatly damaged and the damage continued to decrease progressing outward away from the fourth column of bunk beds.



Remains of metal roofing recovered over bunk bed four, west side

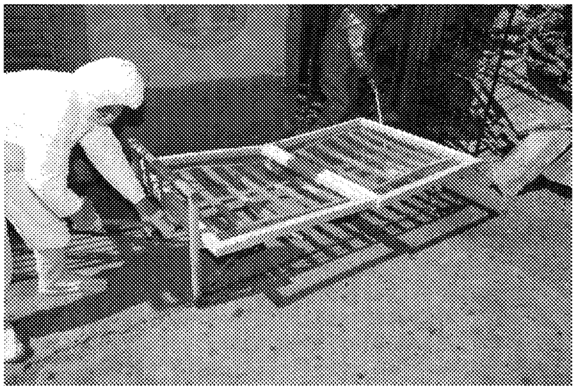


Remains of metal roofing over bunk three (left) and bunk five (right);

metal over bunk three (left) laid upon normal sized roofing material

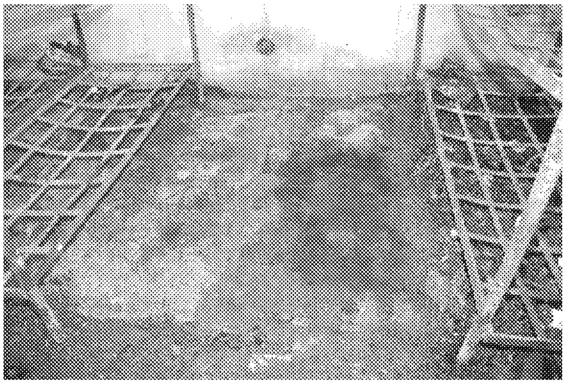
137. Once all the roofing material had been removed, the investigators set up sifting screens and made a decision to sift all the debris recovered in and around the bunk beds that were located on the western side of the module, between columns 2 and 7. To begin this process, the first set of bunk beds had to be cut and removed from the module. After they were removed, the two Electrical Engineers processed the scene. During this time they recovered the remains of any large items that appeared to be electrical in nature. They also inspected the branch circuits that ran through the area. Once the items of interest were removed for closer inspection, the debris was hand removed and taken to the sifting screens. Any wiring or other electrical componentry was identified and inspected by the engineers.

138. Once the first area was excavated, the investigators moved the second set of bunks to the north in the area where the first bunks had been located. The excavation process was repeated, with the engineers inspecting and removing any and all items that appeared electrical in nature. The sifting operation then commenced. This continued until the investigators were past the seventh set of bunks.



Sifting operation for debris removed from Module 6

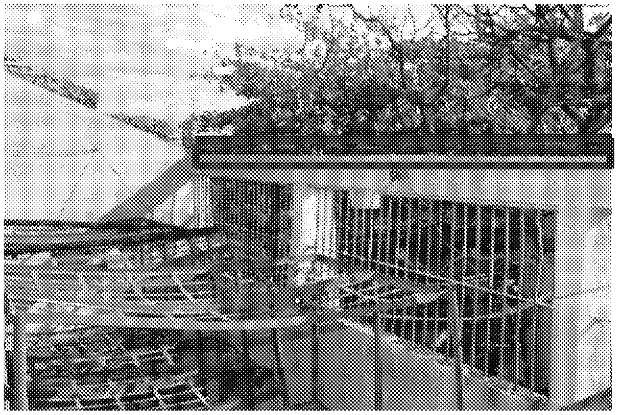
139. Prior to each set of bunks being removed, the investigators made a mark as to the original location of the bunks with chalk on the western wall. This would allow for reconstruction of the bunks back to their original position after the scene was processed.



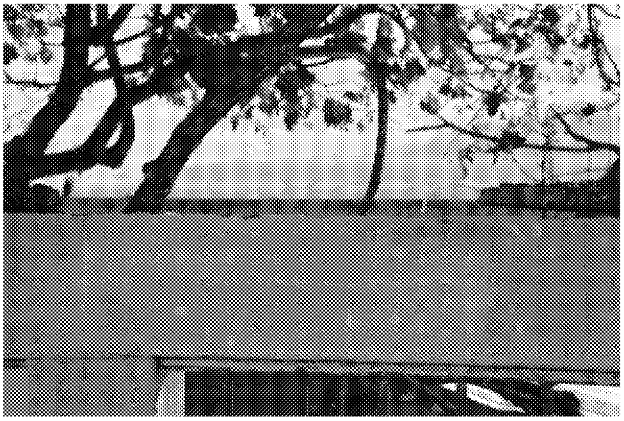
Module 6 after excavation

140. During the sifting operation, nothing remarkable or out of place was found. No glass fragments consistent with bottles were recovered nor was a neck of a bottle; which would be consistent with the use of a Molotov cocktail. No plastic jugs or evidence of other containers was found during the excavation. No glass consistent with candles or any of the small metal plates that are used to secure the wick to the bottom of the candle were found.

141. Once the scene was processed, the investigators took additional photos of the scene. A ladder was brought in to take pictures from an overhead vantage point. From this vantage point, the investigators were able to see that a 2" x 6" wooden top plate had been placed over the exterior western masonry wall. This was placed there to secure the wooden rafters that had supported the roof. The top plate ran the length of the west wall. By inspecting this wood, the investigators were able to see that the wood had been totally consumed in the area above the fourth column of bunks. The damage decreased progressively away from this area.



Wooden top plate (highlighted in red) that spanned the exterior, western wall of Module 6



Close-up of top plate, depicting consumed section

142. Based on the fire patterns found and documented throughout the scene, coupled with the various witness statements, the investigators determined that the area of origin was the fourth column of bunks, along the western side of the Module 6.

PHOTOGRAPH REVIEW

143. The investigators conducted a review of the photographs and videos that were taken prior to the arrival of the IRT. The local authorities had conducted preliminary work immediately after the fire; this was primarily concentrated on the recovery of the numerous bodies that were located within the modules. The photographic evidence depicted the scene prior to the body recovery.

144. In viewing and evaluating the photos, the investigators observed that the vast majority of the decedents were located in the bathrooms of each respective module. The prisoners in modules 6, 7, 8, and 10 moved to the bathrooms in such a number that the bodies were stacked approximately four feet high, with bodies on top of each another. This was not the case in Module 9 due to the fact that so few prisoners were located in the cell. The photographs did reveal that even in Module 9, most of the decedents were recovered in the bathroom.

145. By inspecting the photographs, the investigators observed that there were varying degrees of thermal damage to the bodies. The bodies that were recovered from the center aisle in Module 6 sustained sufficient heat to consume the skin and subcutaneous fat, which resulted in skeletal remains. This was the only module in which this was observed. Additionally, the stacked bodies of prisoners in the bathrooms were compared. The recovered bodies in the bathroom of Module 6, that were positioned on top of the pile, sustained deep thermal insult to their skin and subcutaneous fat resulting in splitting of the skin and mass loss to the fat and muscles. The bodies in modules 7, 8, and 10 were positioned the same but did not suffer the amount of thermal damage to their bodies as was observed in Module 6. This damage to the bodies in Module 6 indicates that the bodies received sustained greater and more prolonged exposure to heat than the bodies in the other modules.

146. The investigators determined that the location of most of the bodies in the bathrooms supports the opinion that the fire started near the front of the module. Had the fire started toward the rear of the module,

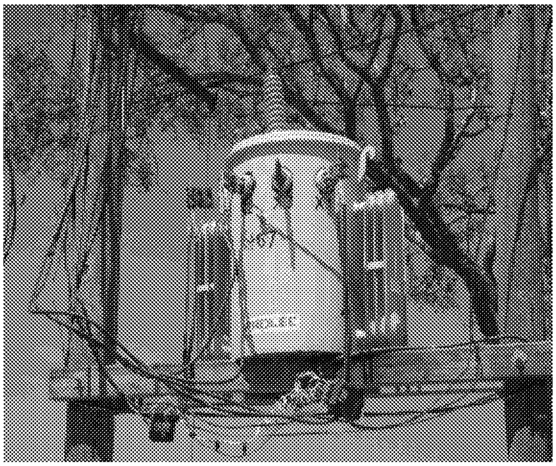
most of the prisoners would likely have moved to the front of the module in an effort to escape. Had it started in the center, the prisoners would likely have been forced into two groups by the fire, one group to the front of the module and one toward the rear. The photographic evidence indicates that since the vast majority of the bodies were in the rear of the module, the fire began toward the front of the module.

ELECTRICAL EXAMINATION:

147. The electrical examination of the scene and the electrical examination section of this report were conducted by and authored by Electrical Engineer (b)(6),(b)(7)(C) (b)(6),(b)(7)(C) PE.

148. Examination of the electrical systems took place on February 18-19, 2012. (b)(6),(b)(7)(C) (b)(6),(b)(7)(C) electrical engineer with the electrical utility ENEE, accompanied the investigation of the electrical system.

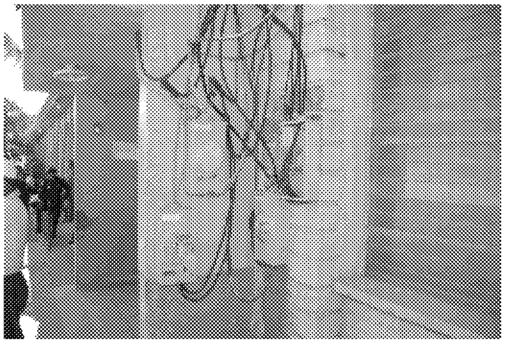
149. Electrical utility service was provided to the structure by a single transformer located at the east entrance to the facility. The transformer was fed by a single phase, 1/0 AWG, ACSR transmission line operating at 19,920 volts. The transformer was protected by a single 10A fuse located in the primary feed line. The transformer secondary was wired as a 120/240 volt, split phase configuration. It was reported the fuse remained intact for the duration of the fire. Power usage was monitored by current tap fed meter mounted below the transformer.



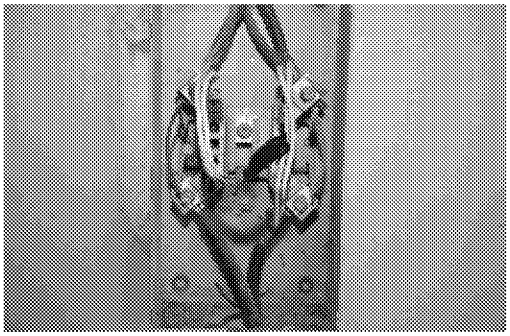
(Utility Transformer)

150. Service drop conductors were routed to an attachment point at the east entrance. Multiple feeder taps were made which fed several meter bases located at the east entrance. Additional feeders were routed to several areas of the compound. The meter bases mounted on the structure did not contain meters. No disconnects were provided at the meter bases. Since no meters were mounted in the bases, THHN copper wire was used to jump from line to load side within the meter bases by securing under the respective line and load terminals.

Service drop and feeder connections



Meter bases used as feeder connections



Meter base connection to affected area

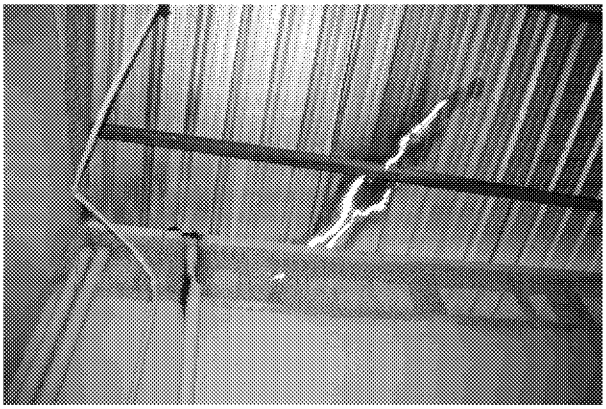
151. Feeder power to the area of the fire originated from a meter base located on the south exterior wall of the east entrance. Since this was the only power to the affected area this investigation focused only on this portion of the electrical distribution system. The meter base was located adjacent to, and accessible from, a seating area. The meter opening on the meter base was covered with cardboard paper which provided no protection from ingress of water or protection from inadvertent electrocution. The jumper wires within the meter base were comprised of two parallel THHN conductors per phase. The copper conductors were secured in the line/load terminals along with the aluminum conductors. The terminals were not suitable for combining aluminum and copper conductors. Due to differing expansion coefficients between aluminum and copper this practice may lead to a loose and ultimately failed connection. One phase had failed at the load connection point. Melting damage was observed to the terminal and conductor that was consistent with a parting arc that occurred as the connection point overloaded and failed during the fire. This damage was not consistent with a connection failure occurring prior to the fire. The second phase was still connected at the time of the investigation. The surviving jumper was cut and taped by a representative of the local utility company on February 18, 2012, de-energizing the remaining live feeder to the affected area.

Feeder conductors in plastic pipe lying on roof

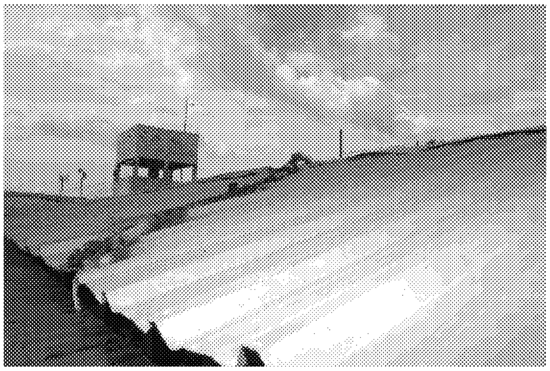
152. The 3/0 AWG, THHN aluminum feeders were routed to the roof and fed through black plastic pipe. No weather tight fittings or strain relief were present. The feed transitioned across the corrugated metal roof, over the prison wall and terminated in a distribution panel in the electrical room.

153. The feeder conductors were severely damaged from above the distribution panel to several feet along the roof. The damage was consistent with arcing through char damage as the plastic pipe and electrical insulation began to melt and char due to external thermal impingement from the fire. Arc burn holes were present in the support

beams as well as long burn and arc melt holes in the corrugated metal roof above the distribution panel. This damage was consistent with fire impingement, not fire causation. This event would have overloaded the conductors and was responsible to the failure of the meter base jumper wires described above.

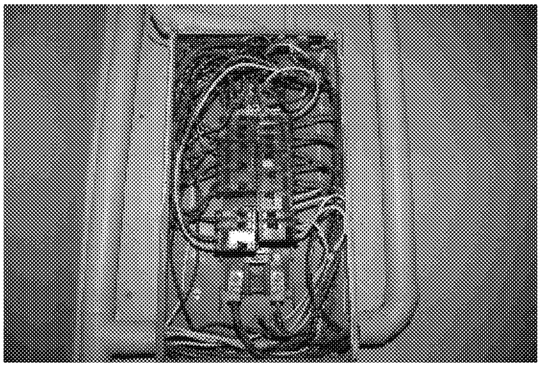


Arc damage to feeder cable and sheet metal roof



Arc damage to roof

154. The distribution panel was mounted on the interior west wall. The thin wall plastic pipe that was used as a substitute for conduit employed no connection fittings at the panel enclosure. One of the phase feeder conductors exhibited approximately 3 inches thermal damage and melting of the insulation at the connection point. This damage was consistent with excessive heating associated with a loose connection. Inmate (b)(6)/(b)(7)(C) (b)(6)/(b)(7)(C) reported this condition existed prior to the fire. The neutral feeder conductor exhibited melting of the insulation from the terminal connection for approximately 4 inches. This damage was consistent with thermal damage caused when the feeders failed and arced to the metal roof and structure. This damage was the result of fire impingement, not fire causation.



Interior of distribution panel

155. The panel contained Square D thermal/magnetic breakers. No main disconnect was provided. All of the circuit breakers were observed to be in the "off" position. The breakers were center trip position with red trip indicators. Inmate (b)(6)/(b)(7)(C)

reported he was alerted to the fire by shouting at 10:20 p.m. He related that he immediately went to the panel and turned off all circuit breakers by hand. He indicated no breakers had tripped prior to his turning them off.

156. Table 1 details the size, style and mounting position of the circuit breakers contained within the distribution panel.

Position 1	30 ampere single pole	Module 6-10		Position 2	15 ampere single pole	Module 6-10
Position 3	30 ampere single pole			Position 4	15 ampere single pole	Module 6-10
Position 5	30 ampere single pole			Position 6	30 ampere single pole	Module 6-10
Position 7	30 ampere single pole			Position 8	30 ampere single pole	Module 6-10
Position 9/11	50 ampere double pole			Position 10/12	30 ampere double pole	Module 6-10
Position 13/15	50 ampere double pole			Position 14/16	30 ampere double pole	Module 6-10
Position 17/19	Blank			Position 18/20	30 ampere double pole	Module 6-10
Position 21/23	50 ampere double pole			Position 22	50 ampere single pole	Module 6-10
Position 25/27	40 ampere double pole			Position 24/26	30 ampere double pole	Module 6-10

(Table 1 – Circuit breaker positions, sizes and configuration in distribution panel)

157. Modules 6-10 were the primary affected areas. Investigation of the branch circuits focused only on those feeding Modules 6-10.

158. All conductors were #8 AWG, THHN copper wires. #8 AWG, THHN copper conductors are rated for 55 amperes. The largest breaker was rated 50 ampere. The electrical insulation of the conductors within the distribution panel was intact with no evidence of melting from overload.

159. Nineteen conductors were routed from the panel into a thin walled plastic pipe. Five conductors were grounded (neutral) conductors and the rest were phase conductors. No grounding (ground) conductors were present. The single pole breakers in positions 1, 2, 4, 6, and 8 were reportedly turned off each day to conserve energy. These reportedly fed the light circuits that were routed down the middle ceiling line in each module. The rest of the breakers, which fed convenience receptacles in the modules, were left on continuously. Inmate

(b)(6)/(b)(7)(C) related that breakers would trip occasionally however, there were no particular breakers that tripped more consistently than any other and none that tripped the day of the fire.

160. The branch circuits were routed along the front of each Module and entered each Module through a hole above the door. The feeds into each module were inspected at the entry point. Modules 6 – 8 and 10 each had four conductors entering the structure (3 phase, 1 neutral). Module 9 had only three conductors entering the structure (2 phase, 1 neutral). The wiring was damaged on the exterior of each module from exposure to the fire. Insulation was burned and melted away exposing the copper conductor. Inspection of the wiring uncovered no arc melt damage to the conductors indicating the conductors were de-energized when attacked by fire. This was consistent with the statement that the breakers were turned off at 2220 by inmate (b)(6)/(b)(7)(C)

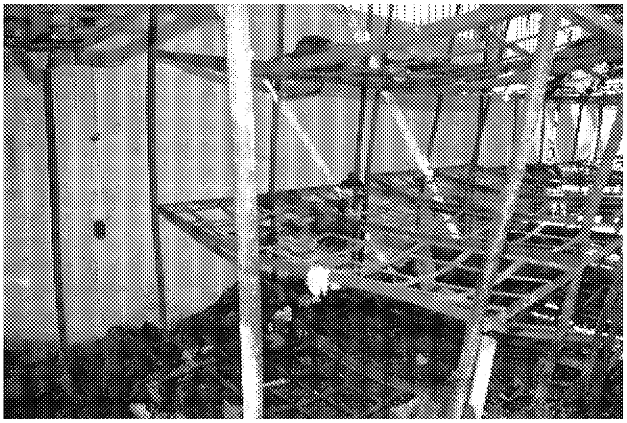
161. Each Module had a single incandescent fixture on the exterior and several had a duplex receptacle also mounted on the exterior. The fixtures and receptacles were heavily damaged from exposure to fire. There were no indications of electrical failure that could have resulted in causing the fire. All damage was consistent with an external attack by fire to de-energized circuits.

Branch circuit wiring above Module 10

162. Module 6 was fed by three branch circuits. One branch circuit fed the exterior lighting and a line of fluorescent fixtures down the middle at the ceiling. One branch circuit was routed along the east wall above the window line. One branch circuit was routed down the west wall above the window line.

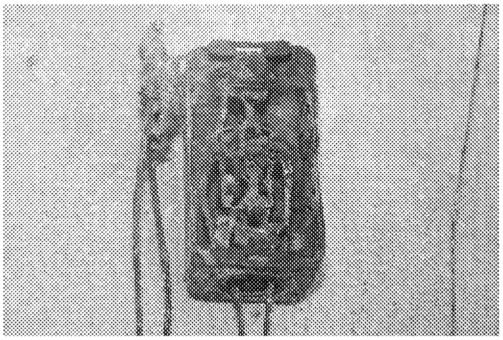
163. Duplex receptacles were mounted on the wall below the branch circuit run. Connections were made by wrapping the stranded copper conductors feeding the receptacles around a section of the branch circuit conductor where the insulation was stripped away. The connection was then covered with insulation tape. Although this provides electrical connection, no mechanical securement is provided. This method of splicing wiring is prone to failure and high resistance heating due to the lack of mechanical securement. Examination of each of the connections within Module 6 showed no evidence of failure that could have caused the fire.

164. Two duplex receptacles were mounted on the west wall between bunk stacks 1 and 2.



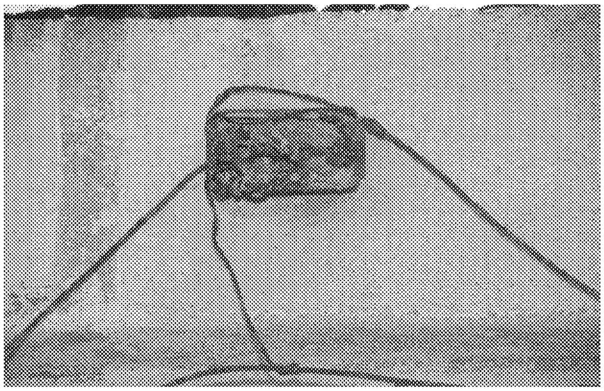
Two duplex receptacles

165. The receptacles were standard 120 volt, 15 ampere receptacles. The receptacles were mounted in steel boxes. The wiring was routed through plastic pipe. All polymeric material was fully consumed. The copper conductors were intact with no evidence of arcing or shorting. The power terminal connections were intact with no evidence of a loose or failed connection. Due to the damage to the wiring a determination of the exact breaker feeding each branch was not possible. However, a 15 ampere receptacle requires a maximum 15 ampere breaker for proper protection. The breakers feeding the receptacle branches were rated either 30 or 50 amperes. Receptacles are required to be rated for the size of the supply. Although a dangerous practice, there was no evidence this contributed to causing the fire.



Duplex receptacle located between bunk stack 1 and 2

166. No independent ground connections were present on the receptacles. Independent ground leads provide a redundant return path to allow an over-current device to function in the event of a ground fault. Additionally, it affords protection against shock if a fault energizes a metal enclosure. Although no independent grounding conductors were present, there was no evidence this contributed to causing the fire.



Duplex receptacle above bunk stack 5

167. A duplex receptacle was located on the wall above bunk stack 5. The ground yoke was intact. The supply wiring was still attached to the power rails. The terminal screws were intact with no evidence of a loose or failed connection. The power rails were melted from external exposure to heat from the fire. The supply connections to the branch circuit conductors were intact with no evidence of failure. There was no evidence of arcing or

shorting or the receptacle or supply wiring that could have caused the fire. All damage was consistent with external exposure to fire.

168. Electrical items were recovered from the area around bunk stack 1 and 2. The items included three desk and one stand electrical fans, two portable stereos, and one portable CRT television set. The devices were examined. Each device suffered damage from exposure to the fire. Thermal damage was consistently heavier on external surfaces. Internal components were protected showing no indication of internal overheating. Supply wiring and internal wiring had no evidence of arcing or shorting. All damage to the devices recovered from the area of bunk stacks 1 and 2 was consistent with an external attack by fire, not fire causation.

169. The area around bunk stack 3, 4 and 5 yielded only a single small desk fan and small portable stereo. No extension cords or power taps were present. The fan and stereo were recovered from the area of the bottom bunks. Each device suffered damage from exposure to the fire. Thermal damage was consistently heavier on external surfaces. Internal components were protected showing no indication of internal overheating. Supply wiring and internal wiring had no evidence of arcing or shorting. All damage to the devices recovered from the area of bunk stacks 3, 4 and 5 was consistent with an external attack by fire, not fire causation.

EXHIBITS:

170. No Exhibits were taken during the investigative process while ATF was participating. Items of evidence or exhibits may have been taken prior to the arrival of ATF. The bodies of the decedents had been recovered by the local authorities prior to the arrival of ATF.

FIRE PROGRESSION TO OTHER STRUCTURES:

171. There was radiant heat exposure to the module building, housing modules 1-5, that was located directly to the south of the affected building. This damage was to the exterior facing of the building and has been previously described.

172. A stand alone, single story building was located to the west of the module buildings. This building served as a school for the prison. This building sustained some thermal damage to the exterior east facing masonry wall. The investigators were also told that the roof of the building was slightly damaged by the fire.

173. An administration building was located to the east of the affected module building. This building was slightly shorter than the module building and the roofline for the administration building was at the same height as the prison windows. As a result, hot gasses migrated out of Module 10 and impinged on the roof of the administration building. The roof was oxidized due to the heat. The administration building had electrical wires running along the roofline. These energized wires had their insulation melted away and allowed the energized lines to come into contact with the metallic roof. This resulted in severe arcing to the grounded metal roof with holes being burned through the roofing material.

174. The prisoners had numerous "stores" throughout the prison. As part of these stores, the prisoners would hang and display numerous items for sale from the various buildings. A number of these items suffered thermal effects from the fire, namely in the form of melting of plastic materials associated with them.

NUMBER OF FATALITIES AND/OR INJURIES:

175. At the time the investigation concluded, it was reported that there were 361 fatalities and an unknown number of injuries associated with the fire. The names and identification information related to the decedents is in the possession of the Ministerio Publico. Information received by the IRT was that there were 852 prisoners housed at the Pentenciaria Nacional Comayagua Farm Prison.

176. Information received from the Criminal Investigations Unit (DNIC) as to the number of deceased per cell is recorded in column two of the chart below. Information provided by the Ministerio Publico as to the numbers of bodies recovered from each module is recorded below in the third column. There was no explanation provided to the ATF team related to the fact that the numbers of deceased were different in the two lists.

Module	Deceased per Module	Deceased physically removed from module
6	100	101
7	77	74
8	79	77
9	6	10 (one female)
10	94	90
Total	356	352

177. Information was received that there were 475 prisoners who survived the fire.

178. At the time that the ATF investigators left the scene, there were still prisoners who were severely injured and in local hospitals; some of whom succumbed to their injuries while the IRT was still in the country. The following is the list of the two area hospitals where the injured were taken immediately after the fire and their status if known when the team left Honduras.

Hospitals	Victims
Escuela	9 (5 of whom had already died)
St. Teresa	12 (all back in prison population)

179. The revised number of deceased at the time the IRT left Honduras was 361.

ESTIMATED VALUE OF LOSS:

180. Damage estimates were not available at the time the investigation concluded. The commander of the prison stated that they were in the process of determining the amount it would cost to replace the building. He also stated that they were evaluating the costs associated with the personal items lost by the prisoners. He stated that it would take months before an accurate figure would be obtained.

WEATHER:

181. Weather was not considered a factor in the ignition and/or development of the fire. The following weather information was obtained from the Soto Cano JTF-B. On February 14th at 10:20 p.m., the wind was blowing at 300°, meaning the wind was coming out of the north and blowing southward. The recorded temperature was 19°C/66°F. The humidity level was 83%. There were no weather fronts in the area and no lighting activity was recorded.

ADDITIONAL INFORMATION:

182. Due to the fact that the prison was still an active prison with the prisoners having access throughout the prison, security measures were put in place to protect the fire investigators. The fire investigators were escorted any time they were in the prison. US Military Police, Honduran Military, and Honduran National Police escorted the investigators into the prison, once within the walls; they provided a human cordon between the investigators and the inmates. As previously stated, the prison still housed a prison population and the prisoners had free access to the areas that the fire investigators were not working in. The investigation was primarily concentrated to the two buildings that housed the prisoner's modules and the area between them. The prisoners were located about three feet away from the investigators; behind a barricade of plastic and wooden chairs, stacked single high with police tape above them, throughout the entire process. The fire investigators needed to be escorted any time they entered or exited the building.

183. Security measures were also implemented for the investigators' movements between the prison and the military base. The investigative team was provided an escort during these movements. A truck with six Honduran National Police officers led the two vehicles that housed the American investigators. Two of the National Police officers were positioned inside the vehicle while the remaining four would stand in the bed of the pick-up truck to provide flank protection. The two investigators' vehicles were followed by a US Military Humvee. This vehicle contained two armed US Military Police in the front of the vehicle and an additional two Honduran Military Police in the rear of the vehicle. One of the Honduran Military Police would stand in the vehicle's copula and provide rear guard protection.

Fire Dynamics

184. The investigative team determined that the fire began toward the top of the fourth column of bunk beds that were positioned along the western side of Module 6. The fire spread naturally with the heat and fire moving upwards and outwards to the bunks that were attached to it. Each of the bunk frames were made of non-combustible steel. The frame that supported the mattress was a system of one inch steel straps creating a

supportive grid pattern. This pattern exposed the majority of the mattress to the bunk below and would allow fire to impinge upon all sides of the mattress.

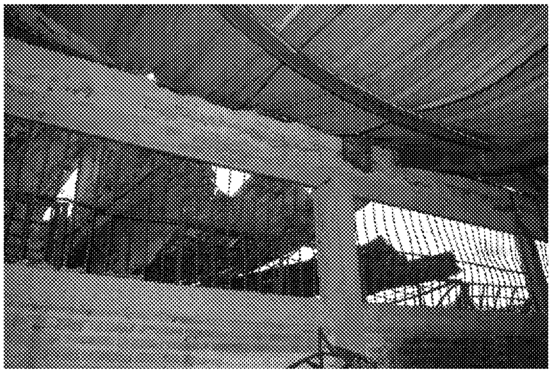
185. The prisoners had been allowed to individualize their sleeping areas. It appears that this was allowed for privacy and comfort. For both of these reasons, the prisoners had surrounded their individual beds with combustibles materials. Examples of these combustible materials were: cardboard, ply board, thin sheets, blankets and other various combustible materials. Additionally, the inmates had their personal possessions which included clothing and other combustible materials in and around their beds. Above some of the beds, bags of clothing were observed hanging from the rafters.

186. Each of the beds had a thin mattress located within it. These mattresses were inspected and consisted of a center polyurethane cushion wrapped with multiple layers of thin cloth material. The entire package was extremely combustible and susceptible to ignition. (See Fire Testing below.)

187. After the fire ignited, it spread both laterally along the mattresses and upwards via the various items hanging around the beds. The upward fire spread would have ignited beds above while drop down and radiant heat would have ignited beds located below the first area ignited. The downward fire spread would have primarily been due to drop-down in the early stages of the fire; a result of thin material dropping downward once it was on fire and flaming drops from the foam from the melting polyurethane mattress. "*Drop down*" is characterized by burning material that falls to the ground and then ignites nearby combustibles.

188. As each subsequent bunk bed became involved in fire, the thermal gases would spread upwards to and then along the pitch of the ceiling. The ceiling/roof in Module 6 was comprised of wooden rafters supporting wood slats. These materials are combustible and the roof would have acted as additional fuel that would have supported substantial fire growth and intensity. This created a continuing loop of flaming combustion fueled by additional involvement of combustible materials as they ignited through typical and natural methods of heat transfer. Ultimately creating an uncontrollable, rapid fire spread.

189. There were four vents in each of the individual modules; these were the front cell gate, the barred opening in the bathroom and the two barred openings on the east and west sides of the modules. In the initial module involved, Module 6, the western opening allowed the hot gases to vent to the outside, but as the fire continued to grow, hot gases would migrate to the ceiling and would create an upper thermal layer. The western and eastern openings were within one foot of the top of the east/west walls and would have allowed the hot gasses and eventually fire to spread laterally to the other modules. The photo to the right depicts the positioning of the barred openings that separated the modules. As can be seen through the bars, the bunk beds (including the bedding materials and other personal items) in



Barred windows that separated the modules the adjoining units surrounded the vent opening(s). These additional combustible materials created a slight blockage of the vent but, more importantly also created a viable ignition material to aid in the rapid spread of the fire.

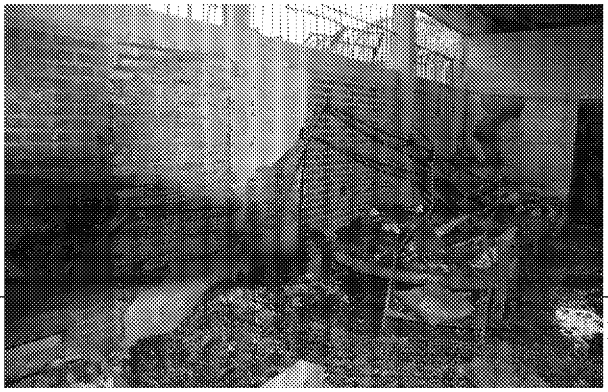
190. As the fire continued to grow, an upper gas layer was created. This upper gas layer continued to increase in temperature until it reached approximately 600°C. Once this temperature was reached, flashover conditions would exist. "*Flashover*" is the transition phase in the fire development where all combustible materials begin to simultaneously ignite due to the radiant heat being radiated downward from the upper gas layer. Once this temperature was reached, the entire module would become engulfed in flames. Human tenability in these conditions approaches zero. Of note, is that flashover is primarily affected by radiation, which is a line of sight heat transfer mechanism. The combustible materials in a direct view of the ceiling would ignite simultaneously; other materials would ignite soon afterwards.

191. Prior to flashover occurring, the heat began to be pushed laterally due, in part, to the pressure created by the heat in the module. Some of the heat escaped to the outside of the module via the western barred opening at the top of the wall. Similar pressure was applied to the eastern barred opening resulting in heat and fire moving laterally in that direction. With the bunk beds being in the aforementioned opening, as the fire and heat moved to the east, it began to ignite the combustibles surrounding the bunk beds as well as the mattresses located on the beds themselves.

192. As the upper gas layer developed, the vents at the sides of the module would transition from a combination of intake for fresh air and exhaust of smoke; to solely an exhaust. This was caused when the smoke and hot gas layer dropped below the open vent. Once that occurred, no fresh air would have been able to entrain into the modules from those openings and they would have served exclusively as an exhaust. When that occurred, the only intake for the air, which is necessary for a fire to continue to burn, was the front module gates.

193. This natural fire spread also explained the testimony of the "medic" that opened the modules during the fire. He stated that as he ran past modules 10, 9, 8, and 7 to Module 6, he did not see fire in them. Module 6 was involved in fire. He then went to Module 7, which was involved in fire by the time he returned. He then moved to Module 8, which was involved in fire when he got there. He then went to Module 9. When he got to Module 9, he saw no visible fire but did see thick black smoke. He did not open Module 9 but moved to Module 10, which was involved in fire.

194. Without understanding how fire moves, the "medic" thought that there was no fire in Module 9. There actually was a hot gas layer at ceiling level in the module. There was no visible fire because Module 9 had only single-high beds as depicted by the photograph in this paragraph. The other four modules had bunk beds stacked four high. The height and configuration of the bunk beds placed additional combustible material in the path of the quickly


Interior of Module 9 depicting single-high bunk beds

traveling hot gas layer. The radiation from this thermal layer caused the combustible materials on the top two bunk beds to reach their auto-ignition temperature. A material's "*auto-ignition temperature*" is the lowest temperature at which a combustible material ignites in air without a spark of flame. This is in contrast to a materials' "*piloted ignition temperature*", which is the minimum temperature a substance should attain in order to ignite under specific test conditions, usually with an open flame. The mattresses, now burning, would create "piloted ignition", which would ignite the unburned particles that were in the upper gas layer. Module 9 had no permanent combustible materials positioned in the upper gas layer and as such there was no "piloted ignition" in the thermal layer. The temperatures were similar as the other modules but there was no visible flame.

195. The fire continued to progress to the next module. The process increased in speed due to the increased pressure from the heat coupled with the increasing thermal energy form the ignition of the additional materials. This caused the fire to be pushed into the adjoining modules with greater speed. In each subsequent module, the fire engulfed the module faster and faster until all the modules were involved in the fire.

196. This fire spread was natural and was what would have been expected by the fire investigators. Due to the amount of combustible materials in the various modules, there was more than sufficient energy to explain this progression and the affects of this fire's growth and movement.

Fire Testing

197. A field flammability test was conducted by the investigators while at the scene. A mattress was provided to the investigators by the prison staff. A small interior section of a mattress, and its surrounding material was used for testing. The testing was conducted within Module 9. The material was placed upon a metal cabinet that was present in the module. This positioning restricted ventilation on the underside of the material. A small piece of floor tile was placed upon the material to hold it in place. Once the fire began, the tile was removed.

Ignition of a section of mattress with an open flame provided by a lighter

198. EE (b)(6),(b)(7)(C) used a handheld lighter and placed an open flame to the material for approximately one second. He then removed the open flame and the material sustained combustion. The fire progressed laterally through and over the polyurethane mattress and the cloth material that surrounded it. The fire spread uniformly throughout the material, producing a flame approximately six to eight inches high. The burning material produced a dark black smoke with a very acrid smell. The fire also created flaming dripping material that dropped to the surface below. The below photographs captures fire spread during the field test.

Above series of photos depict fire migration on mattress; fire spread took approximately one and a half minutes

199. The fire continued to spread until the entire section of material was involved in the fire. The investigators extinguished the fire with water at the conclusion of the test.

200. No identifying information as to composite materials, manufacturer or manufacture date related to the mattresses could be found while conducting the investigation.

CONCLUSION:

201. This conclusion is based on information supplied at the time of the investigation and is based on conducting a systematic examination of the fire scene, evaluating the fire patterns throughout the scene and speaking to witnesses and factoring in the suppression efforts. With the aforementioned factors used, the investigators operating within the scene were able to make a determination as to the origin and cause of the fire. This determination is agreed upon by all the involved investigators who worked within the scene.

202. It is determined that the fire began in Module 6. Specifically, an area of origin was determined to be material within and/or around the top two bunk beds that were located along the western wall of the module in column four. The cause of the fire is believed to be the unintentional application of an open flame or smoking material to available combustibles. These conclusions are based on the following facts that were obtained during the investigation.

203. Three witness statements were of vital importance to the conclusions drawn. The three pertinent interviews related to two of the survivors from Module 6 and from the "medic" that opened the cell doors.

204. The first interview was with the inmate "medic". He heard a commotion and went to his cell door. He saw smoke coming from Module 6 and Module 6 only. He had key access to his cell and exited his cell in the medical unit. He ran to the sally port and told the guard about the fire. The guard threw the cell keys to the

inmate. The "medic" ran back to the south side of the cell building, and in so doing, past in front of Modules 10-6. As he was running toward Module 6, he stated that there was no fire in Modules 7-10 but he did see smoke. As he got to Module 6, he said that he tried to find the key to the door. He described the heat as being incredible and being above him radiating downward. He was able to unlock the cell door and three inmates escaped.

205. The medic then ran to Module 7 and opened the door. By the time he got to Module 7, he said that there was fire at the upper layer of the room. He then ran to Module 8; again, there was fire in the module at this time. He opened the door to Module 8. He ran to Module 9 but saw heavy black smoke but no fire so he ran past it and went to Module 10. This module had fire in it. He was able to open the doors.

206. The above account is consistent with the fire dynamics that occurs during a fire, specifically, his not seeing fire in Module 9, while seeing fire in the other modules. In Modules 6, 7, 8 and 10, the modules had bunk beds that were stacked four high, or approximately 11' high. This allowed combustible materials, namely the mattresses and bedding to be in the upper gas layer. The upper gas layer would have uniform temperatures around 500°C; this temperature would have been sufficient to ignite the mattresses and bedding. Module 9, conversely, had only single bunks. The "medic" reported seeing black smoke but no fire. The hot gas layer was present but there were no combustibles materials at the upper layers to ignite, thus he would not have seen fire.

207. A survivor of Module 6 was interviewed. His bunk bed was on the east side of the module and was the top bunk in the first column of beds. He stated that he heard someone saying something about fire and he looked out his curtain that covered his bedding unit. When he looked out, he saw a small fire along the western wall directly above the top bunk in column four. He also saw someone with water on the ground trying to put the fire out. He went back into his bedding unit and came out a short time later. At this point, the inmate from the bottom bunk said that they needed to get out before they were burned alive. He looked out of his bedding unit again and saw that the fire had greatly expanded, to the point that "the fire was everywhere". He jumped from his bed and landed on the ground, breaking his leg. He moved into the space adjacent to the bottom bunk with four other inmates. He was the furthest into the bedding unit. At some point the heat got too intense for the inmate closest to the center hallway and he ran toward the bathroom. (That inmate was one of the deceased.). The "medic" came and opened the door and he and the other two inmates escaped through the door. One of the inmates, the one closest to the center hall after the fourth ran toward the bathroom, was so badly burned that he died of his injuries after his escape.

208. The burns to the two inmates were consistent with the fire described and the "medic" opening the gate corroborates both stories. The description of the fire is that it was small initially and then spread quickly. With the fuel load located in the module, this fire progression is also consistent with fire growth rates. The fact that the inmate said that he saw a small fire along the west wall does not preclude the possibility that the fire was already burning at a slightly larger rate in the bedding unit directly below. This fire could have been hidden from his view due to the curtains and bedding surrounding the bedding unit. What the inmate could have observed was the fire breaking through to the top bunk along the wall.

209. The final interview was from the other surviving inmate. He resided on the western side of Module 6, in the top bunk in the second column from the gate. He stated that he was awoken to the shouts of "Fire, fire, fire". When he woke, he went to the front of his cell and began to descend to the ground. As he was climbing downward, he looked over to his right (toward the rear of the module) and saw a fire in the fourth column of bunks in the third and top bunks. He stated that he saw "sparking" at the west end of the third bunk. He continued down to the floor. When at the floor, he said he saw four inmates crammed into the first cubicle along the eastern wall. He climbed back up and escaped through the roof. Once on the roof, he heard the "medic" opening the cell gate.

210. This information corroborates the "medic's" interview as well as the other inmate's interview. When describing the fire, he believes that he saw it in its incipient stage, but the fire investigators believe that his time line is slightly different when compared to the others. Whereas the investigators believe the facts of the statement, they believe that the time line is slightly off and that what he believes is the start of the fire…the "sparking"…is actually an energized wire arcing due to heat impingement.

211. The above interviews were corroborated by the scene examination. During the scene examination of Module 6, the investigators were able to remove the corrugated metal roof that had been located over it. The roof above Module 6 was constructed of wood but and had corrugated metal secured above the wood. During the fire, the wood roofing material was mostly consumed resulting in the metal roofing material collapsing onto the bunk beds. When removing the metal roof, the corrugated metal located above the fourth column of bunks on the west side, was by far the most severely damaged. The metal was partially consumed and what was remaining was fragile to the touch. The corrugated metal recovered above the third and fifth column of bunks was the next greatly damaged and the damage continued to decrease as you progressed outward away from the fourth column of bunk beds.

212. A wooden 2" x 6" top plate was located along the western brick wall. This wood top plate provided a nailing surface for the wooden rafters that spanned the module and supported the roofing material. The wood in direct relation to the fourth bed column was totally consumed. Moving away from the fourth bed column, the damage to the top plate decreased in both directions.

213. The excavation of the area surrounding the bunk beds in Module 6, along the western wall was hand excavated and the debris removed was then sifted with sifting screens. During this process, no viable ignition sources were recovered. A number of electrical items and wiring were recovered during this operation. The two electrical engineers inspected all electrical artifacts recovered, as well as the branch circuit wiring that was a permanent part of the building. During this process, they were able to conclude that the electrical system and the various electrical components recovered did not start the fire.

214. During the excavation and sifting process, no glass consistent with a glass bottle was found. The glass that was found was much thicker and was glass from television screens. Glass bottles have thinner glass and it is generally rounded. No neck from a bottle was recovered. In the use of Molotov cocktails, the neck of the bottle almost always remains and is easily recognizable. It is the opinion of the investigators that no Molotov cocktail was used in this fire.

215. The use of flammable liquid was hypothesized and ruled out. Generally, flammable liquids would be poured at floor level. Had this occurred, the fire would have been observed at floor level and progressing upward, which was not the case in this fire. Additionally, an application of flammable liquids to the floor would have resulted in fire on both sides of the aisle. This was also not reported. Had a flammable liquid somehow been introduced higher in the bunk beds, the incipient fire would have been much greater. When a flammable liquid is poured and ignited, the immediate thermal impact causes significant damage to a large area. Once the vapors are expended, other available combustibles in the area continue to sustain flaming combustion. This is especially true with materials that are thermally thin, which was the case in this fire. This would have resulted in an almost immediate large fire. None of the survivors reported seeing this type of fire. In this specific fire, the available combustibles that were present within Module 6 would have been sufficient to create a fire of this magnitude. Based on these facts, the investigators believe that a flammable liquid was not used in this fire.

216. A check with the Soto Cano JTF-B military base showed that there were no weather storms in the area and based on that, lightening was ruled out as a cause of the fire.

217. The cause of this fire was believed to have been the use of an open flame in relation to smoking materials. The surviving witnesses stated that there were no arguments or fights prior to the fire occurring. Based on the information at hand, it is believed that the fire was an accident and occurred by the mistaken ignition of the available combustibles in the area of the top two bunks, in the fourth column along the western side of Module 6.

218. Based on the aforementioned facts that were available at the time of this report, the fire is presently classified as “accidental”.

DISPOSITION:

219. This investigation is closed.

ATTACHMENTS:

Diagram prepared by Honduran Police
Photographs of scene examination taken by ATF
Photographs of scene examination and body recovery taken by Honduran authorities prior to ATF arrival
Investigator’s notes (to be kept in case file)

ATTACHMENT 1

Diagram of Prison

(Prepared by Honduran authorities and provided to the investigative team)